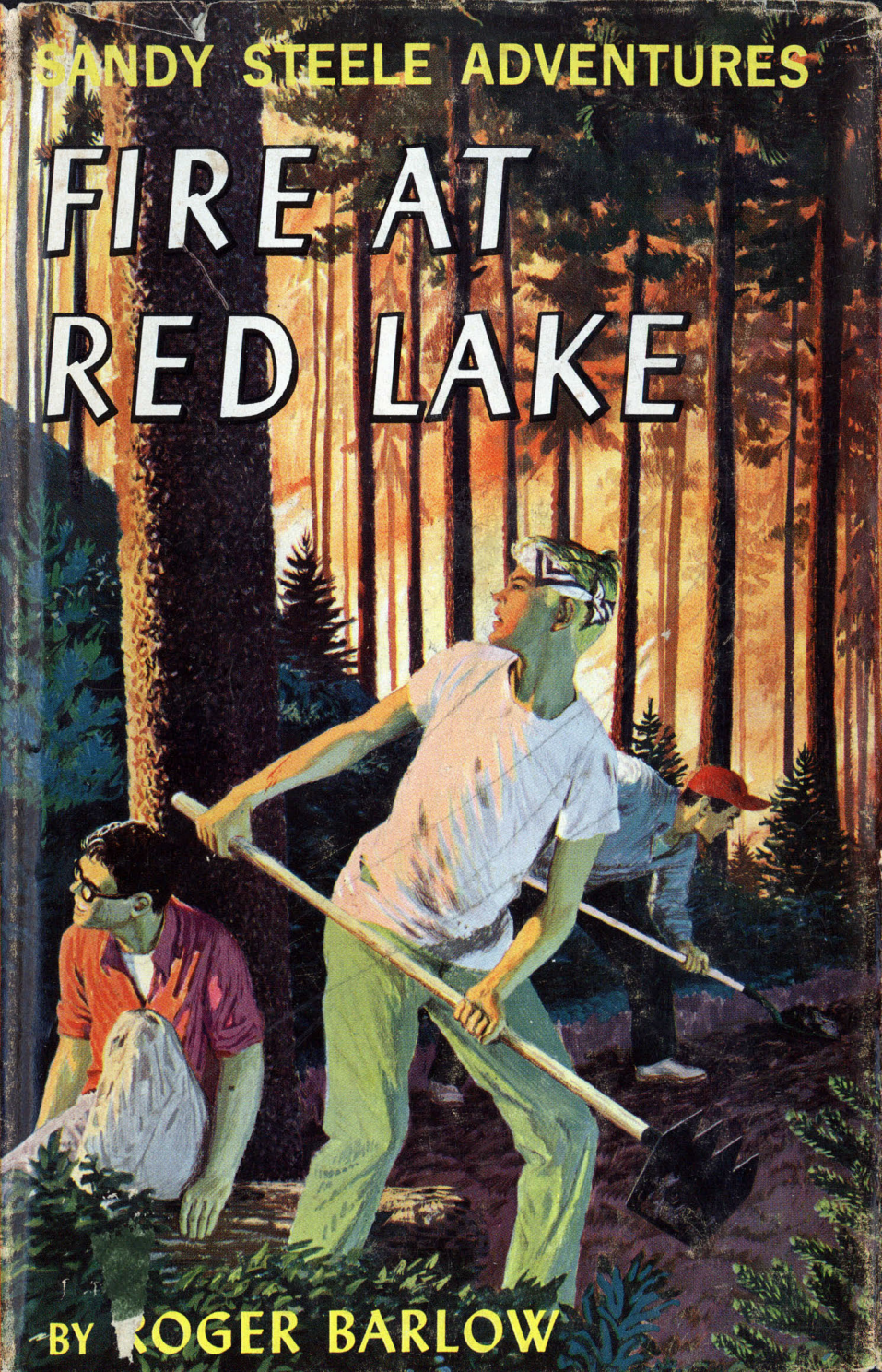
SANDY STEELE ADVENTURES

FIRE AT RED LAKE



BY ROGER BARLOW

SANDY's Uncle Russ (formerly a U. S. Army general) invited Sandy and two of his friends to spend part of their vacation with him at his lodge on Red Lake in Minnesota. The vacation took an unexpected turn, however, when a forest fire broke out. All four of them felt strongly that they had to help the fire fighters in whatever way they could. They also felt a special responsibility because Uncle Russ knew, from a message from the Pentagon, that an unexploded bomb had been jettisoned by a plane of the SAC somewhere not too far away.

The account of the struggle against the forest fire is a thrilling, often a heartbreaking, one. Add to that the menace of the unexploded bomb and you get a story that will have you gasping.

$1.00

SANDY STEELE
ADVENTURES
by Roger Barlow

If this is the first Sandy Steele Adventure you have read, you will undoubtedly want to know more about Sandy and his friends. The back of the jacket lists other titles in the series. Choose any one of them and be sure of entertaining reading.

Whether Sandy is at home in Valley View, California, or traveling about the country, he meets interesting people and finds exciting things to do. Join him on his adventures and have fun!

Jacket painting by Paul Nonnast

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SANDY STEELE ADVENTURES

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Fire at Red Lake

ROGER BARLOW

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by

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SANDY STEELE Adventures

4

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SANDY STEELE ADVENTURES

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TROUBLED WATERS

Sandy Steele Adventures

FIRE AT RED LAKE

BY ROGER BARLOW

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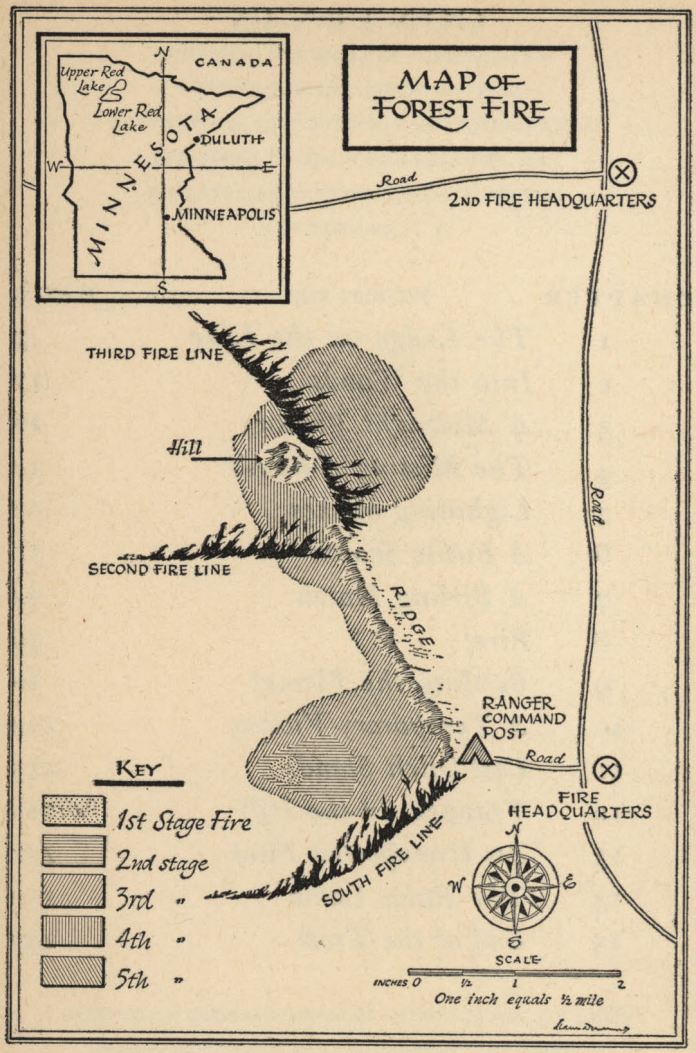
MAP OF FOREST FIRE
CANADA
Upper Red Lake
Lower Red Lake
MINNESOTA
DULUTH
MINNEAPOLIS
N
S
E
W
Road
2ND FIRE HEADQUARTERS
THIRD FIRE LINE
Hill
SECOND FIRE LINE
RIDGE
Road
RANGER COMMAND POST
Road
FIRE HEADQUARTERS
KEY
1st Stage Fire
2nd stage
3rd "
4th "
5th "
SOUTH FIRE LINE
SCALE
INCHES 0 ½ 1 2
One inch equals ½ mile

CHAPTER ONE

The Lodge on the Lake

THE BATTERED STATION WAGON bumped and groaned over the rutted dirt road at about ten miles per hour, churning up great clouds of dust. Sandy Steele wiped the grime and grit from his face with his handkerchief and bent forward to yell in the driver's ear.

"How much further, Mr. McClintock?"

The wizened little old man tugged his dirty straw hat down tighter as the front wheels lurched in and out of a hole with a jolt that sent all four occupants of the car bouncing several inches off the seats.

" 'Bout 'nother quarter of a mile is all," the man finally replied.

Sandy grinned at his high-school friend Jerry James, seated beside him. "Well, we've come twenty miles; I guess we'll last another fifteen hundred feet."

The short, stout boy seated up front with the

driver turned to face them, his eyes owlish behind thick, horn-rimmed glasses. "One thousand, three hundred and twenty feet, to be precise," he said solemnly. "That's a quarter of a mile exactly."

Sandy and Jerry let out long-suffering groans. At fifteen, Clyde Benson (Quiz) Taylor was the No. 1 student at Valley View High School in central California where the three boys lived only houses apart. At the age of ten, Quiz had been a winning contestant on a television quiz program, which accounted for his nickname. Quiz could discuss Einstein's Theory of Relativity or the batting averages of the leading hitters in the National and American Leagues with equal ease. His mind was a bulging storehouse of facts and figures that his friends found very valuable. But at times the superior manner in which he flaunted his knowledge could be highly irritating.

"Why did you have to ask him along?" Jerry demanded wearily. "Living with Quiz for a whole month is more than any human being can take."

"That lets you out then, Jerry," Quiz said, grinning.

"Okay, wise guy." Jerry thrust his lantern jaw out indignantly. "Just you wait till we're camping out in the deep woods—hundreds of miles from civilization, with no one around to hear your deathly screams."

The driver interrupted this byplay, pointing to

a patch of blue between the trunks of the giant pines. "There, you can see the lake now, fellers. Five minutes more, we'll be at Mr. Steele's camp." He caught Sandy's eye in the rear-view mirror. "You're Russ Steele's nephew, ain't you?"

"Yes, sir."

The driver nodded. "Great man, Russ Steele. My son was in his division in Korea. Said General Steele was the best CO any outfit ever had. Used to be real interested in his men. My boy said the dogfaces swore by him."

"Uncle Russ is a regular guy all right," Sandy said.

"I'll say," Jerry put in. "How many big shots like him would spend their summer vacations taking a bunch of teen-agers on a camping trip?"

The driver looked surprised. "Russ never talks about his work. Is he really a big shot?"

"Mr. Steele is vice president in charge of research of World Dynamics Corporation," Quiz explained loftily. "That's the firm that does all that secret government work."

The driver tipped back his straw hat. "Well, now, I never would've guessed it. He sure don't act it."

At that moment, the station wagon rounded a curve, and the road broke out of the trees on the lake shore. To the left and right, water stretched away as far as the eye could see. Straight across,

the far shore was barely visible through the blue haze on the horizon.

Jerry whistled in wonder. "Wow! That's a lake? It looks more like the Pacific Ocean."

"If I remember correctly," Quiz said, "the Red Lake Indian Reservation is somewhere around here, isn't it?"

McClintock nodded. "Couple of miles west, on the lower lake. Actually, there's twin lakes, connected by sort of a gooseneck. Russ Steele's place is on the south shore of the upper lake. Here we are now."

Set back in an acre of cleared land beyond the beach was a two-story, rambling lodge with a wide front porch. The rough, pine log walls were solidly chinked so that they could withstand the frigid north Minnesota winters; Russell Steele, an avid hunter, used the place as often in winter as he did in summer. A small dock ran out into the lake and served as a mooring for three rowboats as well as a 16-foot cabin cruiser.

As the station wagon drew up in front of the porch, a tall, powerful man with broad shoulders came down the steps to greet them.

"Welcome to Red Lake."

Sandy leaped out of the car and wrung his uncle's hand vigorously. "Uncle Russ! It's great to be here."

A lithe six-footer, Sandy seemed puny beside the older man. In his plaid shirt and dungarees, Russell Steele looked more like a lumberjack than a corporation executive. He shook hands with the other two boys.

"Glad the whole gang could make it," Russ said, grinning.

"You're a peach to invite us, Mr. Steele," Jerry said.

Russell Steele walked over to the front window of the station wagon and put one big hand on the driver's shoulder. "How's it going, John?"

John McClintock removed his straw hat and blew the dust off the crown. "Not bad, Russ. But I could use some rain like everybody else around here."

Russ frowned. "It's bad. Very bad. The ground is like cement and everything is dry as parchment. I don't mind telling you I'm worried, John."

The driver shrugged. "Like living in a tinder-box. I hear you're takin' these young fellers out into the deep woods. Better not go too far. We're just about due for a forest fire."

"We'll be careful," Russ promised. He reached into his pocket and took out a folded ten-dollar bill. "Thanks for bringing the boys out, John. Here, let me take care of their taxi fare."

John McClintock pushed the extended bill

away firmly. "Not on your life, Russ. This one's on me. I owe you a favor after what you did for my family last year."

He looked up at Sandy. "Last winter when your uncle was up hunting around my place, my youngest cut hisself bad on a band saw. Russ hiked nine miles through a raging blizzard to fetch the doc."

Russ laughed easily. "I needed the exercise, John. Now you take this money—" But before he could finish, the old man had gunned the motor and the station wagon leaped forward. It turned into the drive, backed around in the road, then headed off in the direction of town.

Russ helped the boys carry their luggage into the lodge and upstairs to their rooms. "The bathroom's at the end of the hall. After you shower, come down to the porch. I'll have the cook fix you some lemonade and sandwiches."

Sandy was the first one finished. Russ Steele looked up and grinned as his nephew appeared in the doorway, running a comb through his unmanageable blond hair with dogged determination.

"Still having trouble with that cowlick, I see," Russ said.

"One of these days I'm going to get a butch hair-

cut like Jerry James's. Then all I'll have to do is run a washrag across it."

"Your mother will never buy that," Russ laughed. "How are the folks?"

"They're fine," Sandy said. "Dad's down in Mexico for two weeks."

Russ took a long draw on his pipe. "On another one of those government geological expeditions, I suppose. I envy John, getting to see so much of the world."

"He enjoys it, all right," Sandy admitted. He looked up as a big, sleek-haired dog came bounding out of the pines on one side of the house. "Who's that?"

"That's Prince, the cook's Doberman pinscher." Russ whistled softly through his teeth.

The dog's sharp ears and muzzle thrust alertly into the air; then, with the bounce of a recoiling spring, he came striding across the sunburned lawn and cleared the front steps in a single leap, to squat in front of Russ with his short stub of a tail wagging vigorously.

"Talk about jet propulsion!" Sandy exclaimed. "What do you feed him on?"

Russ laughed and leaned over to stroke the animal's glossy black coat. "Pound for pound the Doberman is the strongest canine bred. One of the most intelligent, too. We use them as watch-

dogs at the plant. I brought this fellow up as a Christmas present for the cook two years ago. Prince, meet Sandy."

Promptly, the dog turned to Sandy and raised his right paw."

"How do you do, Prince," Sandy said solemnly, taking the paw and shaking it. "Say, he *is* smart."

Jerry and Quiz came out on the porch a few minutes later, and Russ entertained the boys by putting Prince through some of his tricks. But the dog was temporarily forgotten when a rangy, string bean of a man arrived with a huge tray piled high with sandwiches and a pitcher of lemonade.

"This is Lars Johannsen," Russ introduced him to the boys. "He's my cook and caretaker. Lars used to cook in a lumber camp, so he's used to chow hounds. Dig in, fellows."

Johannsen, who had lank blond hair bleached white by the sun, and a drooping mustache, flashed a snaggle-toothed grin. "Ya, you eat all you want," he said with just a trace of a Scandinavian accent. "Plenty more to eat in kitchen."

"You don't have to coax me," Jerry said, grabbing a big, two-inch-thick sandwich in each hand. "I'm famished."

"Didn't they feed you on the plane?" Russ asked.

"Sure," Sandy told him. "We had a big break-

fast just before we landed. But Jerry is the hungriest man alive."

"If he keeps it up, he won't make the football team this year," Quiz said dryly. "He'll be too fat to bend over to center the ball."

"Look who's calling who fat!" Jerry spluttered between mouthfuls. "The original blob in person."

Quiz sniffed. "My mother thinks I'm perfect just the way I am. When this baby fat drops off, I'll have a physique the likes of which you've never seen."

"*That* I can believe!" Jerry said.

"Break it up, boys," Russ laughed. "After a month in the woods, you'll both be slim as reeds and hard as rocks."

"Will we really be camping out for the whole month?" Sandy asked curiously.

"Well, we'll always be on the move. Of course, there will be times when we'll stop over at ranger stations or lumber camps. But for the most part, we'll be roughing it in the best frontier tradition."

"What time do we leave?" Jerry wanted to know.

"Tomorrow morning at six. Packs will be rolled before we hit the sack tonight."

"Packs?" Jerry asked.

Russell Steele nodded as he relit his pipe with a long wooden match. "A conventional infantry-

man's pack. Bedroll, shelter half, tent pegs, mess kit, raincoat, socks, underwear, spare shirt and levis, canned goods, K-rations, toothbrush, shaving kit, trenching tools, and, of course, a canteen and cup on your belt. We'll split up the larger utensils—pots and frying pans."

Jerry James jumped up, stood at attention and threw off a snappy salute. "Yes, sir! Hut-two-three-four! We're in the Army now. We march at dawn."

Russ grinned appreciatively; then he said in his most authoritative, military manner, "There's just one thing, soldier. You don't salute with a boloney sandwich in your hand."

CHAPTER TWO

Into the Woods

AFTER A PRE-DAWN BREAKFAST of sausage, eggs and flapjacks, Russell Steele and the three boys strapped on their packs and walked down to the dock where Lars Johannsen was warming up the cabin cruiser. Prince was running back and forth on the pier, barking excitedly.

Jerry eased his thumbs under the pack straps where they cut into his shoulders. "Boy, this stuff is heavy. You mean to say soldiers carry all this weight for miles and miles?"

"More weight than that," Russ told him. "Our packs don't weigh more than thirty or forty pounds. An infantryman may pack better than sixty pounds. And that doesn't include his cartridge belt and rifle."

"Me for the Navy," Quiz said emphatically.

Russ laughed. "After a few days you won't even realize your pack is there."

The sun, a steaming red ball through the morn-

ing mist over the lake, was just showing above the treetops as they climbed aboard the cruiser. Russ cast off and the cook advanced the throttle slowly. With a roar of the twin exhausts, the sleek craft shot away from the dock, her bow lifting as it cleaved through the clear, blue water. Prince scrambled up on the top deck and stood at the prow, leaning forward into the fine spray whipping back across the cabin.

"He's got a fine pair of sea legs," Jerry said.

Sandy laughed. "Two pairs, you mean. He looks like a figurehead on one of those old sailing ships, doesn't he?"

Russ outlined the month's itinerary: "Lars will drop us off at the northeast corner of the lake, and we'll strike out for Big Falls. From Big Falls we'll head south to Bow String Lake, and from Bow String west back to the lodge. Actually, we'll be traveling in a big triangle, about one hundred and twenty miles altogether, I'd say."

"This is a lumber region, isn't it, Mr. Steele?" Quiz asked. "I've always wanted to see lumberjacks at work."

"You'll have your chance, Quiz," Russ promised him. "Although the lumber industry in Minnesota is only a shadow of what it used to be. A little more than a century ago, more than three quarters of the state was forested. But ruthless cutting of timber without any thought of con-

servation or restocking has all but wiped out the great pine forests of the Lake States. The short-sighted men responsible never stopped to consider how long it takes a tree to grow. Why, some of these big fellows are mere babies after one hundred years."

The little launch was fairly skimming across the mirror-like surface of the lake now. There wasn't a hint of a breeze, and although it was still early morning, the sun burned down so intensely that they had to string up an awning over the rear deck.

"Another scorcher," Russ said grimly.

Lars grunted. "We better get rain soon, or we have pretty big trouble. One spark in these woods and *poof!*" He threw up his hands.

Russ spoke seriously to the boys. "I'm afraid we're going to have to forgo the joys of the evening campfire. It would be much too dangerous. I brought along a Coleman stove to cook on."

Jerry was disappointed. "Heck, that's half the fun of camping out—shooting the breeze around the fire."

"I feel bad about it myself," Russ agreed. "But if you ever had had the misfortune to see a forest fire at first hand, you'd understand that it's out of the question."

"Have you ever seen one close?" Sandy asked him.

"Yes, I did. Down in Southern California a couple of years ago. It was the most horrible experience of my life." He seemed to go tense at the recollection.

Jerry shivered and gazed intently at the approaching shoreline; the foliage stretched away unbroken to the horizon like a roof over the forest. "I'd hate to be somewhere in the middle of that if a fire did break out."

"I don't think we have anything to worry about, as long as we're careful," Russ assured him. "And you don't have to worry about the natives; their livelihoods—and lives—depend on good fire-prevention habits."

"That's all well and good, sir," Quiz said somberly, "but what about lightning?" He studied the cloudless sky arching all about them like a pale-blue china bowl. "When this hot spell breaks, you can bet it will break with a ripsnorting thunder-and-lightning storm."

"You're a cheerful sort," Jerry grumbled.

Russ Steele's brow furrowed in concentration. "It's a good point, Quiz. All we can do is hope that if lightning does ignite any small fires, a good rain will follow soon enough to douse them."

"Don't they have fire spotters in these woods?" Sandy asked.

"Certainly. The U.S. Forest Service has rangers stationed in fire towers throughout all critical

areas on twenty-four-hour duty. But there's an awful lot of territory to cover. Many times a blaze will be out of control before it's detected."

The conversation broke off as the shoreline loomed up rapidly now. Lars steered the launch toward a rickety wooden dock before a small frame bungalow set back about 100 feet from the water's edge.

"An old army buddy of mine owns that camp," Russ told them. "He won't be up until the hunting season."

As Lars maneuvered the launch expertly alongside the dock, Russ leaped out and gave the mooring line a few turns around a piling. He lent a hand to each of the boys in turn as they stepped up on the gunwale and hopped gingerly across to the wooden platform.

"These packs throw you off balance," Quiz grumbled, heading gratefully for solid land.

They all laughed as Prince, who was leaning far out over the bow watching the fish dart about in the clear water, lost his footing and went tumbling into the lake. He surfaced and went streaking for shore like a seal. The big dog scrambled out of the lake a few feet away from Quiz and shook himself vigorously, sending the spray flying in all directions.

"Hey!" Quiz complained, stumbling backward. "Somebody turn off the sprinkler system."

"Now, you won't have to take a bath tonight," Jerry kidded him.

When he was through shaking, Prince sat down on the bank and watched them with his head cocked to one side.

"I think he wants to go with us," Sandy suggested.

"Take him along," Lars said. "The exercise will do him good."

"Good idea," Russ agreed. "All right, boy, you can come with us if you want to."

Lars gunned the motor and waved. "Well, so long. Have a good time."

Russell Steele cast off the mooring line. "We will, Lars. And I promise to take good care of Prince."

Lars laughed. "Prince take good care of you, I think. See you in couple of weeks."

The boys watched until the boat was just a speck in the distance. "What a sweet outfit that is, Mr. Steele," Jerry said admiringly. "I could spend the whole summer just cruising around the lake like that."

Russ took out his pipe and filled it from a plastic pouch. "Before you go back to California, we'll try and get some water skiing in."

"Boy, that will be great."

Russ led the way up the beach to the bungalow.

"We'll fill our canteens with fresh water from the pump behind the house and be on our way."

They struck out through a grove of pines with Russ leading the way. The boles were thick around as a man and clean of limbs for about thirty feet up. A dim, soothing green light filtered down through the interlaced canopy of branches above them.

"It reminds me of a cathedral," Sandy said.

The silence was eerie; their footsteps were almost soundless on the spongy forest floor.

"It's like walking on cotton," Jerry said. "This must be the softest ground in the world."

"We're really not walking on the ground," Russ said. "The duff and humus here must be a foot thick."

"What's duff and humus?" Jerry demanded.

"Decayed vegetable matter," Quiz translated promptly. "Falling pine needles, scraps of bark, dead plants and bushes."

As they got farther away from the lake, the matter underfoot began to rustle crisply. A pine cone fell, rattling through the dry boughs. Russ glanced up and frowned.

"If only it would rain," he sighed.

At the end of the first hour, he called a halt. "Ten-minute break." The boys protested that they weren't tired yet, but he was adamant. "If

you walk until you're tired, you won't want to get up again. A ten-minute break every hour helps prevent fatigue. And remove your packs. The idea is to relax completely."

Jerry sat down with his back to a tree and removed his left shoe and sock to examine a red welt on his instep. "Gee, I think I'm getting a blister."

"Let's see." Russ came over and knelt down by him. "Hmmm, it looks that way." He went to his pack, got out a first-aid kit and found a Band-aid.

As he applied the little adhesive bandage to the blister, his eyes fell on Jerry's sock lying on the ground.

"Is that a cotton sock?" he asked sharply.

"Yes, sir," Jerry answered.

"I told you fellows distinctly to wear wool socks, didn't I?"

Jerry's face reddened. "Yes, but it was so darned hot that I thought—"

"Jerry," Russ said patiently, "I didn't tell you to wear wool socks just to make you uncomfortable. I wanted to save you a lot of agony. If you keep on wearing those thin socks for a couple of days, we'll have to carry you back on a stretcher."

Sandy and Quiz stood nearby curiously. "How's that, Uncle Russ?" Sandy asked.

"A good pair of heavy wool socks protects your feet; keeps them dry and won't bunch up in blister-making creases. Any soldier or woodsman,

anybody who does a lot of hiking, can tell you. In my old army outfit, wearing cotton socks on a hike was a punishable offense."

"Hear, hear!" Quiz said with relish. "I vote we assign Jerry to permanent KP duty for fouling things up."

Sandy grinned. "I second the motion."

Jerry's lantern jaw sagged. "Aw, fellers, have a heart! General Steele, I appeal to you."

Russ laughed. "I have to admit that sounds a trifle severe. Let's compromise. Jerry, you can consider yourself on special detail for one night. All the mess kits and pans."

Jerry relaxed against his tree. "Whew! That was close. I thought for a while you were going to court-martial me."

"I'm all for it," Quiz said testily. "Personally speaking, I think you ought to face a firing squad." He ducked as Jerry let a pine cone fly at his head.

Prince went running after the cone, retrieved it and dropped it in Jerry's lap. The boy scowled at the others as he scratched the big dog behind the ears. "At least I have one friend in the crowd," he said.

CHAPTER THREE

A Midnight Visitor

AT NOON they stopped in a small clearing for a quick K-ration lunch. The boys were intrigued by the contents of the oblong, waxed-cardboard boxes.

Jerry announced the articles as he removed them. "Biscuits, fig bar, instant coffee, sugar, a can of cheese and bacon—say, who ever said the army eats bad!"

Russell Steele placed a pot of water on the Coleman stove. "Nobody ever said the army eats bad. Matter of fact, it eats darn good. There's nothing wrong with K-rations, except that a steady diet of them can get monotonous."

When they were finished eating, Sandy and Jerry scooped out a deep hole in the forest floor with their shovels and buried the garbage.

"Ordinarily, I'd prefer to burn it," Russ told them, "but a fire is out of the question now."

They resumed walking until about four-thirty, when Russ consulted the walk-o-meter strapped to his leg. "Well, we made fifteen miles today. That's not bad," he said. "Let's call it a day."

Quiz groaned as he dropped his pack to the ground. "I am so pooped, I could crawl into my bedroll right this minute."

"Without supper?" Jerry asked incredulously.

"Frankly, yes."

Russ frowned. "None of that, Quiz. You've got to eat, even if you have to force every mouthful down. If you don't, you'll be weak as a cat tomorrow."

Sandy looked around at the tall trees towering over them like giants with their arms outstretched. A chill ran along his spine. "Have you ever noticed how nature seems to work against you when you're out in the wilderness like this? It's constantly playing tricks on you. Like Quiz being too tired to eat, or people falling asleep in the snow and freezing to death. All your instincts seem to be wrong. It's scary, sort of."

Russell Steele nodded soberly. "The Indians used to say that the wilderness spirits resented the intrusion of the white man because he came to destroy the forests and the wild beasts. They attributed all kinds of devilment to the spirits. Whenever a white man was lost in the woods,

mauled by a bear, injured by a falling tree or struck by lightning, the tribal medicine men would nod their heads wisely."

"Heathen superstition," Quiz sniffed.

Jerry looked around nervously. "Not so loud, huh. Just in case."

Sandy and his uncle laughed. "Okay," Russ said. "That's all the folklore for one day. Let's eat."

They camped in a small clearing on the bank of a stream, which Russ said had once been a raging torrent. Now, only a thin rivulet of water trickled through the rocky bed. Russ scooped out a hollow where the water flowed between two boulders, to form a small pool, so that they were able to wash up and fill their canteens.

Supper consisted of canned beans, bacon and pan-fried biscuits. Everyone ate heartily, with the exception of Prince, who turned up his nose at the conglomeration of food they piled up on a tin plate for him and stalked off into the woods.

"Probably off to catch himself a rabbit," Russ said.

Jerry wrinkled up his nose distastefully. "And I thought he was a nice dog. That's cruel."

"Don't be a dope," Sandy said. "Is it any more cruel than slaughtering cows, pigs, sheep and little lambs to feed our faces?"

"Animals are nicer than people," Quiz said. "They only kill each other for food. It's the

beautiful balance of nature. The fish and birds eat the insects; and they in turn provide food for the larger animals. Every living thing has its place and purpose."

"Even snakes?" Jerry asked, suddenly scanning the ground suspiciously.

"Even the snakes," Quiz said.

Sandy laughed. "Don't look so worried, Jerry. They won't bother you unless you bother them first. I read it in a book."

"Yeah," Jerry said. "But how do I know the snakes around here read the same book?" He grinned as the other two boys moaned and rocked back and forth with their heads in their hands. "It wasn't *that* bad, fellows."

Russ put down his empty dish and began to fill his pipe. "I think a joke like that rates KP for another night, at least."

Sandy and Quiz helped Jerry clear up the mess kits, forks and pans and carry them down to the pool.

"Hey," Sandy remembered suddenly, "we didn't bring any soap powder. How can he wash these greasy things in cold water without a strong soap?"

"We could boil some water," Quiz suggested.

Russ got up from where he was relaxing against a tree and joined them. "What's the matter with sand?" he asked.

"Sand!" the boys chorused together.

"Sure, it's the best detergent there is. Mix up some of that fine sand on the bank with a little water and you'll get these utensils as sparkling clean as your mothers' best silverware." He turned away, shaking his head. "Fine lot of woodsmen we'd be, going camping with a case of soap powder and steel wool."

While Jerry was finishing up the dishes, Russell Steele showed Sandy and Quiz how to erect the pup tents. "Each of us has a shelter half in his bedroll," he explained. "Half of a tent, to be exact, with enough wooden pegs to anchor it to the ground. We also have one ridgepole apiece. When we pair off, we have the makings for a complete tent; that's how they do it in the army."

From the creek, Jerry yelled, "What happens if there's one guy left over?"

Russ laughed. "He stands first tour of guard duty."

The sky was still light when they crawled into their bedrolls. Sandy and his uncle shared one tent, and Quiz and Jerry the other.

Jerry sighed contentedly as he lay back. "I must be tired. This old ground feels like a feather mattress to my weary bones."

"Don't forget," Sandy called from the other

tent, "you're lying on a bed of duff and pine needles."

"You guys are crazy," Quiz grumbled. "It's okay if you lie flat, I guess. But I can only sleep on my side. What are you supposed to do with your hips?"

"That's what you get for being so fat," Jerry chortled gleefully.

"Try scooping out a hole for your hip to fit into," Russ suggested.

Quiz unzipped his sleeping bag and sat up. Working with his fingers, he shaped a small hollow in the soft duff, then settled down again. "Ahhh, that's better," he said with satisfaction.

"You see," Jerry gloated, "there are some things you can't learn in books."

"Oh, shut up!" Quiz mumbled.

Before Sandy dropped off to sleep, he heard Prince return to camp. The big Doberman took a long drink from the creek and then settled down in front of the tent at Russell Steele's feet. His presence there gave Sandy a feeling of warm comfort.

It seemed to Sandy that he had just closed his eyes when the noise of voices, barking and the pounding of his own heart jolted him out of a deep sleep. For a moment he lay there, paralyzed by terror. He opened his eyes, then shut them

quickly as a blinding spot of light knifed painfully into his optic nerves. He had caught a fleeting glimpse of his uncle sitting up and clinging to Prince's collar with one hand.

With the full return of consciousness, Sandy could make out a strange voice talking earnestly and urgently to Russell Steele.

". . . they've been on your trail since noon, General Steele. The Forest Service has had every ranger in the district looking for you. I spotted your dog from my fire tower about eight o'clock and started to follow him. Of course, he lost me pretty quick, but I knew you had to be somewhere in the vicinity."

"Like finding a needle in a haystack," Russell Steele said. "You must know these woods, all right."

"My fire tower is about five miles from here. I'll take you there and we can radio headquarters. They'll hook you up direct with Washington."

Shading his eyes against the light, Sandy sat up. "What's up, Uncle Russ?"

"Oh, Sandy, you're awake. Good. We'll have to break camp immediately. The Pentagon has been trying to get in touch with me. Very urgent. This is Dick Fellows, Sandy; he's a U.S. Forest Ranger."

"Hi," Sandy said, squinting at the young man who was crouched in front of their tent.

The ranger touched two fingers to his stiff-

brimmed hat and grinned. "Sorry to disturb your sleep. You guys must be plenty tired if this is your first day on the trail." He stretched out one hand toward Prince, who was still growling suspiciously deep in his throat. "Your friend here doesn't trust midnight visitors."

Russ released his grip on the dog's collar and gave him a light smack on the rump. "He'll be all right, now that he knows you're not an enemy. He wouldn't have attacked you, in any case, unless you pulled a knife or a gun. Prince has been trained to hold his quarry at bay until help arrives."

Sandy climbed out of his bedroll. "I'd better go wake up the rest of the gang."

"The rest of the gang is already awake," Jerry's voice sang out from the darkness, "lying here quivering with our blankets pulled over our heads."

Quiz Taylor crawled out of the tent on his hands and knees, fumbling in his breast pocket for his eyeglass case. "This moron got it into his thick head that we were being attacked by Indians from the reservation."

Dick Fellows laughed. "He's partly right at that, I guess. My grandpaw was a pure-blood Dakota."

Russell Steele struggled into his boots. "Well, suppose you escort us back to your tepee, chief."

CHAPTER FOUR

The Missing A-Bomb

THEY REACHED the ranger fire station shortly after three in the morning. It was a tower of tubular steel reaching over one hundred feet into the air. Jerry craned his neck at the small cabin perched on top of it, a boxlike silhouette against the brilliant starlit sky.

"You *live* up there?" he asked the ranger.

"Certainly," Dick said. "It's very comfortable."

He led the way up the flight of steel stairs that ran around the outside of the tower. When they reached the platform at the top, Jerry looked down and grabbed frantically at the guard railing.

"Yipes! I can't even see the ground."

The ranger pushed the door open, flicked on a wall switch, and a pale amber light bulb flashed on in the middle of the ceiling. Sandy realized that the one-roomed structure was larger than it had appeared from the ground. There was a double-decker wooden bunk against one wall, a

comfortable-looking leather easy chair in the nearest corner, and three straight-back wooden chairs. The wall opposite the bed was occupied by a sprawling table; most of the table was taken up by a huge topographic map, dotted with colored pins. A compass and a variety of other instruments were scattered over the table. An impressive short-wave radio rig sat in one corner. The other furnishings included a small refrigerator, a foot locker and a bookcase. The four walls were solid plate glass from waist-height to ceiling.

"This is all right," Jerry said. "Boy, I'd give plenty to have a little hideaway like this."

Quiz walked across to the well-stocked bookcase and examined the titles. "What a wonderful place to read and study," he said enviously.

"It has its advantages," the ranger admitted. "But it sure gets lonely at times."

It was the first time Sandy had got a good look at Dick Fellows. He was a pleasant-faced young man with straight black hair, piercing eyes and an aquiline nose. He wore the brown uniform of the Forest Service and heavy storm boots.

Quiz walked to one of the big picture windows and peered out. "I can't see anything," he complained.

"Light reflection," the ranger explained, and flicked off the wall switch, plunging the room into darkness. Immediately, the broad canopy of the

forest leaped into prominence, stretching away on all sides beneath them.

"What a view!" Sandy breathed.

"Wait till you see it in the daylight," Dick Fellows told him. He turned the light on again and went across to the radio gear. "Have you ever worked one of these things, General Steele?"

Russell Steele grinned. "I had one of the first ham licenses in this country, young fellow."

"Good; I'll contact headquarters and turn it over to you."

Russell Steele looked slightly embarrassed. "I'm afraid I'll have to ask all of you to step outside until I find out what this is all about."

"Certainly, sir," the ranger said. "I'll take the boys downstairs and give them a lecture on forestry." He flicked on the switch and picked up the transmitting mike, twirling dials with his free hand.

"KYAT calling KVK . . . Fire station KYAT calling headquarters . . . Come in, KVK . . ."

As soon as contact had been established, Russell Steele slipped into the operator's chair and put on the earphones.

The ranger and the boys made the long descent to the ground, where Prince was waiting patiently at the foot of the stairs. He wagged his tail and rubbed against them when they patted him, but

occasionally he would whimper and glance up anxiously at the top of the tower.

"He's wondering what happened to Uncle Russ," Sandy said.

Jerry followed the dog's gaze. "I'm kind of curious to know what gives up there, myself."

Dick Fellows held up his hand, motioning for silence. "Do you hear that?" he asked.

The boys stopped talking and listened. Faintly from the northwest there came a distant rumble of thunder.

"Maybe we'll get some rain," Sandy said hopefully.

"Let's hope so," the ranger said. "And pray that it isn't just a lightning storm."

"Do you stay up all night looking for fires?" Quiz inquired. "In bad seasons like this, I mean."

"Sometimes I do, when there's been a lot of lightning striking in my sector. Most nights I set my alarm clock to wake me up every few hours or so."

"You live up here all year?" Jerry asked.

"No, we only man these watchtowers during the fire season."

"How do you get food and water?" Sandy wanted to know.

"There's a stream just a few hundred yards back, and I get my supplies by packhorse from

headquarters." Dick Fellows went on to describe the fascinating life of a forest ranger.

About twenty minutes later, Russ hailed them from the top of the tower. "All clear. Come on up, boys."

As soon as Sandy stepped into the observation room, he knew that whatever had transpired between his uncle and the Pentagon had been very serious. Russell Steele's face was gray beneath its tan, and it was the first time in Sandy's memory that he had ever looked his age.

"Trouble, Uncle Russ?" he asked hesitantly.

Russ nodded. "Bad trouble. The very worst."

"I don't suppose you can tell us what it is, sir?" Dick Fellows said.

"Well—it is top secret—for as long as it's possible to keep it that way." Russ Steele seemed to be struggling with a problem. "Still—I'm going to need all the help I can get. And we're so isolated here that there's not much chance of a leak, even if you were inclined to blab about it. Which I know you wouldn't be," he added hastily.

"You have my word, sir," the ranger said quietly.

"And ours," the boys chorused soberly.

There was a glint of determination in the older man's eyes. "Good. I think you can help. You're all familiar with the Strategic Air Command, aren't you?"

"SAC Never Sleeps!" Quiz recited the slogan of the famous Air Force arm. "Their bombers are in the air twenty-four hours a day. If the United States was ever attacked, SAC stratojet bombers armed with A-bombs would be on their way to knock out vital targets in the enemy's homeland within seconds."

Russ Steele nodded. "That's pretty accurate, Quiz. The Strategic Air Command is the watchdog of our borders. Now, for an outfit that is literally flying twenty-four hours a day, their safety record is amazing; statistics show that a man is safer riding in an SAC bomber than he is driving in the family car." The muscles tightened across his prominent cheekbones. "But accidents do happen. And last night a B-52 stratofortress had a serious accident."

"I heard about that on the radio," Dick Fellows cut in. "It crashed somewhere in Manitoba, Canada. All the crew were killed."

"That's only part of the story," Russ went on. "The last radio report from the bomber placed it over Lake Superior. There was a small fire aboard, but the radio operator thought they had it under control. Shortly after that their transmitter conked out. The Air Force never heard from them again —ship blew up in the air just south of White Mouth Lake on the Canadian border."

Sandy and the others listened in shocked silence

as he continued: "Most of the wreckage has been recovered—and the bodies of the crew." He paused dramatically. "But there is absolutely no trace of the A-bomb they were carrying."

Dick Fellows let out a long whistle of astonishment. "What happened to it?"

"Nobody knows. The most logical theory is that they jettisoned the bomb when the fire began to get out of control. Over some desolate area. It could have been dumped almost anywhere between Lake Superior and the scene of the explosion. Search teams have been out scouring the most populated areas since dawn yesterday; they're the critical points. Not that there's any danger of the bomb detonating, but a thing like this could cause a lot of hysteria. Then there's the matter of secrecy." He grinned wryly. "It wouldn't do for the wrong kind of people to find it—the kind who would put up a tent around it and sell tickets."

Quiz frowned. "If the bomb casing is cracked or otherwise mutilated, wouldn't there be some danger from radioactivity?"

Russ Steele regarded the boy solemnly. "I'd prefer not to discuss that aspect right now, Quiz. We won't be in any danger searching for it, I can tell you that much. The Air Force is going to drop us a couple of Geiger counters from a helicopter tomorrow morning. So we'll have ample

warning if we approach an area contaminated by radioactivity."

Quiz Taylor's eyes were enormous behind his thick glasses. "*We're* going to look for it?"

"That's what the call from the Pentagon was all about. They knew I was up here and they want me to take charge of the search operation in this area. We won't have any help from the military until the more densely populated areas have a clean bill of health, but we'll do the best we can in the meantime."

He turned to Dick Fellows. "Ranger headquarters are advising all fire stations within a forty-mile radius to clear the woods of campers, fishermen and sight-seers."

"You folks are the only party I've seen in my sector in weeks."

"Good. And now I'd suggest that we all get to bed for what's left of the night. Tomorrow will be a rough day." He glanced at their packs piled up in the middle of the room. "There's plenty of room for us to spread our sleeping bags on the floor."

"You can take my bunk, sir," the ranger said quickly.

Russ smiled. "That's mighty generous of you, Dick, but I wouldn't hear of it. I've imposed on you enough for one night."

When his four guests were settled in their bedrolls, the ranger turned out the lights and scanned the surrounding woods carefully from all four windows.

"I guess it'll keep till morning," he said wearily, as he stretched out on his bunk.

Just before he fell off to sleep, Sandy was aware of a tremendous luminous flash in the sky to the northwest. "Heat lightning," he heard the ranger mumble, but he was too exhausted to worry about it.

CHAPTER FIVE

Lightning Strikes

THE STORM HIT with the suddenness and impact of an earthquake at 6:00 A.M. An ear-splitting crash sent the five sleepers jerking up like jack-in-the-boxes. On all sides of the tower the sky was alive with jagged streaks of lightning. The thunder rolled through the air in continuous waves, shaking the earth. The tower creaked and trembled violently. Sandy saw a pair of binoculars on the table dance crazily over the edge and crash to the floor.

Dick Fellows leaped out of his bunk in T-shirt and shorts and swept the other instruments off the table. "A couple of you up here!" he shouted. "The rest of you pile onto chairs or my bunk. Insulated glass legs. Save your life if the tower's hit. Keep your feet off the floor."

Sandy kicked out of his bedroll and scrambled up on the table. Jerry and Quiz dove headlong onto the bunk. In a more leisurely fashion, Russ

Steele and the ranger sat down on high stools.

They had just settled themselves when they were blinded by a tremendous ball of blue fire that shimmered in mid-air just outside the north window. An instant later, they were deafened by an explosion that sounded like the end of the world. The tower bucked madly, and Sandy was sure it was going to topple over or collapse. Gradually his vision cleared to reveal the most terrifying sight that he had ever witnessed in his entire life. The whole room was full of tiny blue sparks that sizzled as they ran in chains across the icebox and stove and along the metal strips of molding that trimmed the edges of the floor and ceiling. Everything metal was encircled by a sparkling halo. He could scarcely believe his eyes when he looked at the other people in the room. Quiz Taylor's long hair was standing up perfectly straight on his head like a brush; the same was true of his uncle and Dick Fellows. His own scalp tingled strangely, and he could feel it bristle. Only Jerry's close crew-cut was unaffected.

"Don't be frightened," the ranger said calmly. "There's no danger as long as you sit tight."

"On the contrary," Quiz said brightly. "I wouldn't have missed this for the world." He grinned as he touched a hand to his hair. "A fascinating phenomenon of static electricity. Those sparks, too; they're harmless."

"You and your education!" Jerry moaned. "I'm petrified. Say, how long do these things last?"

The ranger shrugged. "Hard to say. Maybe ten minutes; maybe an hour." His face was grave with concern. "And every minute it lasts increases the chance of one of those bolts starting a fire. If only it would rain!"

Sandy suddenly remembered the dog, who had remained below on the ground. "Poor Prince. I wonder how he's taking this?"

The ranger smiled. "Unless I miss my guess, he's holed up under my dynamo shack out back —along with an assortment of rabbits, squirrels and chipmunks. There's nothing like a little lightning to make buddies out of natural enemies."

"I wish I was with him," Jerry said, "instead of sitting on top of this giant lightning rod."

Abruptly it began to rain, a driving downpour, and miraculously, it seemed to Sandy, the lightning stopped. The boys began to cheer and crowded against the windows, watching the drops pelt the treetops below. But their elation didn't last very long. In less than five minutes, the rain ceased, as if a giant sprinkler had been turned off. Within a quarter of an hour, the clouds disappeared and the sun beamed through. Thin wisps of steam began to rise from the leaves, giving the illusion that the entire forest was smoking.

Dick Fellows slouched despondently on his stool. "I knew it. Not even enough to moisten the ground. And God knows what that lightning started. A couple of good bolts hit trees; I could hear it."

Sandy scanned the woods to the horizon on all sides. "I don't see anything to worry about. No fire, no smoke."

"It's not that simple," the ranger told him. "A fire may be burning for days before it's even detected, particularly in stands of conifers—pines, spruce, et cetera—where the duff is thick. For example, suppose one of those lightning bolts struck a snag—a dead tree—all dry and punky like those sticks the kids light fireworks with. Maybe there's a single spark smoldering deep down in the trunk, below the surface. Maybe it's as big around as a pea today; tomorrow it may be the size of a penny. It's got plenty of time—and lots of fuel. Slowly it will spread, eating up through the duff until it reaches the surface. Now, it's really ready to go, once it hits the open air and has all that lovely litter on the forest floor to feed on. If we're lucky, we'll spot it now because of the smoke." He stared out grimly across the trees. "With everything so dry, we'd have to be real lucky to control it before it blazes up in the brush and crowns."

"Crowns?" Jerry said doubtfully.

"Burns through the top of the trees," Quiz explained, "in the foliage."

"That's *real* trouble," the ranger said. He turned to Russ Steele. "Gee, sir, I'm afraid I won't be able to help you out today. I'm going to have to stay rooted up here for the next twenty-four hours."

"Don't apologize," Russ said. "First things first. A forest fire at this time could really complicate my problem."

"Hey!" Sandy exclaimed. "What would happen if that missing A-bomb was smack in the middle of a raging forest fire?"

Russ Steele looked vaguely troubled. "I don't know for sure. Probably nothing. It would depend on a great many factors. I'm not anxious to find out, I can tell you."

The drone of a plane motor suddenly drew their attention to the east window. "It's a helicopter!" Quiz said excitedly.

"Come on!" Russ said, heading for the door. "Let's go downstairs."

No sooner had they reached the ground than Prince came crawling out from under a small shed at the edge of the clearing, barking happily and leaping all over Russ Steele. Russ scratched his head, chuckling. "Dick had you pegged dead to rights, you old coward."

Jerry knelt down solemnly and held out his right hand to the dog. "Shake, old buddy. Us cowards have to stick together."

The boys waved as the big chopper began to circle the tower in tightening circles, losing altitude until it was almost level with the observation booth. Slowly it cut speed, until at last it seemed to be hanging motionless in space, held aloft by the great whirling rotors. A hatch opened in the bottom of the fuselage, and a crate was let down carefully on the end of a cable. Before it could touch the ground, Russ Steele rushed over and grabbed it, bringing the fragile package gently to earth. Quickly, he unhooked the cable and waved up at the helicopter. The cable was reeled in smoothly, then with a roar of its engines, the copter leaped into the air. Minutes later it disappeared over the treetops.

The boys watched with interest as Russ Steele unpacked the carton and removed two oblong black Bakelite boxes from the packing. They had a very unscientific, unprepossessing appearance.

"Is that all a Geiger counter is?" Jerry said with a trace of disappointment. "The transformer on my old electric trains looks more complicated."

Russ smiled. "The Geiger counter *is* very simple, Jerry—especially when you consider how delicate it is and what it can accomplish."

"How does it work?" Sandy asked.

"We made one in the science lab once," Quiz said eagerly. "It's just two electrodes, really. One of the electrodes is a thin metal cylinder; the other is a metal wire enclosed in a glass tube filled with gas—like a neon light. When the counter is brought near any radioactive substance, the rays given off ionize the gas—so it can conduct electricity—allowing the current to jump the gap and close the circuit, the same way it does when you switch on a light—"

"Only instead of a light, it activates an audible indicator," Russ said. "That's the *clack-clack* you hear when the counter detects radioactivity. Look how sensitive it is." He held one of the black boxes near his wrist watch, and it began to chatter vigorously.

"Holy cow!" Jerry exclaimed, leaping backward.

Russ laughed. "That's the infinitesimal grain of radium in the luminous dial. So, you can feel secure that it will warn us if we enter an area where there's any unusual radioactivity."

He rummaged around in the carton and pulled out two canvas straps. "These hook on the ends so the counter can be slung across your shoulder like a camera."

Prince came over and sniffed suspiciously at the plastic boxes. "Nothing to eat there, feller," Sandy told him.

"Eat! That's a good idea," Jerry said. "I'm famished."

Quiz was disgusted. "Only Jerry could think of food at a time like this. Who cares about eating when there's an A-bomb lying right at your doorstep?"

"I hope *not,*" Jerry said, looking around with an expression of exaggerated horror.

"Jerry's right," Russ said firmly. "The first order of the day is to pack away a substantial breakfast. We may be tramping through the woods until dark. Let's go upstairs and see what Ranger Fellows has cooking." He gathered up the two Geiger counters and walked to the tower.

Prince whined reprovingly as they left him at the foot of the steps. "I'll bring you down a bowl of chow right away," Sandy promised.

They were halfway up the stairs when a sudden thought struck Jerry. "Say, Mr. Steele, what would happen if one of those big lightning bolts hit that atomic bomb square on the nose?"

Russ Steele's face contracted in a sour grimace. "I don't know. And stop trying to spoil my appetite."

CHAPTER SIX

A Futile Search

IMMEDIATELY AFTER BREAKFAST, they set out north from the ranger station.

"We'll be back in three days," Russ Steele told Dick Fellows. "Using your station as a base, we're going to cover all the territory between the Black River and the Rapid River, from Red Lake to the Canadian border."

"Good luck," the ranger said. "I hope I can be of some help to you."

Russ shook the young man's hand. "You have already, Dick."

As they started through the woods, with Prince crashing through the underbrush ahead of them, Sandy was pessimistic. "How much ground do we have to cover, Uncle Russ?"

"One hundred and twenty square miles or thereabouts. I'm not sure exactly."

"It seems so hopeless," Sandy said. "I read in the paper about an airplane that crashed in the north

woods with three men aboard and they didn't find it for four months. A bomb—even an A-bomb—must be considerably smaller than a two-engine plane."

Russ nodded grimly. "It's a big order, all right. But don't forget, there are, or soon will be, hundreds of teams like ours, each covering an assigned sector. If we're all thorough and painstaking, we'll find the bomb sooner or later."

"What about air patrols, General Steele?" Quiz asked. "Why can't the Air Force retrace the route of the B-52 with another plane? Maybe they could spot the bomb."

Russ Steele jerked his thumb up at the sky as a wedge of pursuit ships droned overhead. "They've been doing that for two days, but it's a long shot. First of all, no one knows precisely what route that big bomber was flying after the radio conked out. Secondly, it's pretty difficult to spot objects from the air, especially in heavily forested country like this. An object can drop through this thick canopy of foliage and leave no more trace than if it had fallen into the ocean. No, I'm afraid this is a job for the foot soldiers."

"FOR-ward MARCH!" Jerry bellowed in a good imitation of a drill sergeant. "Hut-two-three-four . . ."

Russ laughed. "I'm afraid this operation calls for a loose formation, Jerry. Suppose we maintain

an interval of about fifteen hundred feet between each two men. That will keep us within easy hailing distance of each other. I'll be on the right flank with one of the Geiger counters. You boys can draw lots to see who takes the left flank with the other counter." He grinned. "That poor guy will have to walk a little more than a mile before we even get started."

"I'll be the fall guy," Sandy volunteered. "I'm in better shape than Jerry or Quiz."

Jerry sniffed. "Show-off! But I'm not proud," he added hastily. "Go ahead."

"That's settled, then," Russ said. "Our direction will be due north. You all have compasses; check them regularly. All right, we may as well get started." He unstrapped the walk-o-meter from his leg and handed it to Sandy. "You better take this to pace off the intervals. Quiz, Jerry and I will wait until you've reached your position. Then you sing out and the boys will pass the word down the line. If any of you see anything unusual, sound off and sit tight until I get there." He pointed to the black box Sandy had slung over one shoulder. "And if that Geiger counter begins to chatter, backtrack fast until it stops."

Time passed quickly for Sandy. He was a little lonely at first, but it didn't last long. There were so many fascinating things to be seen in the forest when you were alert, he realized. Chipmunks and

squirrels spied on him from tree hollows. He passed within two feet of a rabbit burrowed into a pile of leaves. A lizard that blended so perfectly into the bark of a tree that it was invisible from more than twelve inches away didn't loose its rigidity, even when he touched its tail. After the first hour, Prince came bounding through the brush to keep him company. An hour later, the dog went off to join somebody else. At regular intervals, the boys would call out to each other, though an attempt by Sandy and Jerry to keep up a running conversation soon left both of them hoarse. They had no chance to get bored. The enormity and excitement of the mission they were performing saw to that.

At noon, Russ Steele called a halt for lunch. "Stay where you are," he called to Quiz. "Break out a K-ration. Pass the word on to Jerry and Sandy."

Five hours later, they rendezvoused on the banks of a small river. "We'll camp here for tonight," Russ said. "We should make the Canadian border sometime tomorrow afternoon. There's a logging camp up there, Quiz, so you'll get a chance to see lumberjacks at work."

"If I'm still alive," Quiz said wearily. "I feel as if I'd walked a hundred miles today."

Russ grinned. "Not quite. Maybe twenty."

Jerry looked up from a heaping mess kit of beef stew. "Twenty miles! Say, that's pretty good. Bet you never figured you'd ever be walking that far, eh, Sandy?"

"I'll say." Sandy, who had removed his shoes and socks, lifted one bare foot and blew on it. "The soles of my feet feel all puffed up."

"Before you go to bed soak them in the river," his uncle told him. "Matter of fact, we can all use a good bath."

After they had finished eating, the boys teamed up to wash the mess kits and pans. Then they stripped off their clothes on the river bank.

"Last one in gets KP tomorrow night," Russ said. He dove off a small bluff, cleaving the water in a perfect racing dive. Prince was right at his heels, yelping excitedly.

"Boy, that dog sure loves to swim," Jerry said.

Russ surfaced and flicked water at the Doberman with the back of his hand. "He's a regular porpoise. Come on in, boys; it's great."

Sandy walked gingerly down the steep bank and stepped into knee-deep water. "Wow, is it cold!"

"Sissy," Jerry laughed and went splashing past him. "Yipes! It's ice!"

"Well, don't kick it all over me!" Sandy roared.

Quiz gritted his chattering teeth. "The only way to get into ice water is *fast.*" He belly-

whopped between Jerry and Sandy, spraying them from head to foot.

"You sneak," Jerry gasped.

"C'mon," Sandy laughed. "Let's duck him." He dove in after Quiz.

After a few minutes they began to enjoy their bath thoroughly. "It's not so cold," Sandy said.

Jerry flopped on his back and blew a stream of water into the air like a whale. "We're just too numb to feel it. Look, I'm turning blue."

"I don't care. It feels like heaven after hiking twenty miles through the woods with the temperature at an even hundred."

Russ swam over to them. "How do you know it was a hundred?"

"I've got a thermometer," Quiz told him. "In the little glade where I ate lunch, it was one hundred degrees Fahrenheit at a quarter past twelve."

Russ gazed somberly toward the forest. "If it doesn't rain soon—well—I don't know."

A purple twilight was settling rapidly over the river as they toweled their bodies briskly and dressed. By the time they finished putting up the pup tents, it was dark. But even darkness brought little relief from the heat that night. And the air was alive with mosquitoes, a few of which managed to penetrate the netting.

"How are we going to get any rest?" Jerry

groaned. "It's too hot to climb into our sleeping bags and if we lie on top of 'em we'll be eaten alive."

Quiz sat up and searched through his pack. "I considered this eventuality." He held up a small aerosol bomb. "DDT. Shut your eyes and hold your breath for a minute, Jerry." He pointed it up in the air and pressed down the button until the little enclosure was thick with white mist.

"I always knew you were a genius, Quiz," Sandy yelled over from the other tent. "How about lending it to us?"

"Help yourself." Quiz reached under the netting and rolled it over to his friend.

Jerry sighed blissfully as Quiz lay back. "That did the trick, Quiz, old boy. You sure saved the day—the night, I mean."

Quiz grumbled as he rolled over on his side. "If I had *really* been smart, I would have brought along an inflatable mattress." But two minutes later he was asleep.

The new day dawned as bright and hot as the previous one. They broke camp shortly after 8:00 A.M. and resumed their trek north at the same 500-yard intervals. The morning passed uneventfully.

At noon, Sandy relayed a question down the line to his uncle: "When do we eat?"

Russ Steele asked the boys whether they could hold out for another hour. "I think we can make the logging camp," he explained. A chorus of "ayes" answered him.

Shortly after one o'clock, Sandy heard a loud crash in the distance. Right after that Russ Steele rallied the boys around him.

"We're approaching the logging camp," he told them. "That noise you just heard was a tree being felled. Sandy, we'd better get these Geiger counters out of sight. No use inviting a lot of questions that we can't answer. We'll wrap them up in our shelter halves."

When that had been taken care of, Russ led the way forward. Gradually the trees began to thin out and diminish in size.

"This is a new stand," Russ explained. "Nowadays, logging companies do as much replanting as they do cutting. With proper methods of conservation, they hope to undo some of the mistakes of their predecessors."

A quarter of a mile farther on, they emerged into a large clearing in which a half dozen low, sprawling buildings were situated. There was a great deal of activity in the camp. Across the clearing, a convoy of trucks jammed with lumberjacks pulled out of a dirt road and drew up in front of one building where a long line was forming. Whooping and laughing, the lumberjacks vaulted

the tail gates of the trucks and piled over the sideboards.

Russ Steele smiled. "Chow time. That's the mess hall."

"What's their hurry?" Quiz asked.

"I guess you get mighty hungry swinging an ax," Sandy said. "I read once that a logger eats about five thousand calories a day to keep him going, as compared with the three thousand that the average man needs."

Jerry grunted. "My old man says I must eat close to ten thousand a day, every time he has to pay the grocery bill."

"Ten thousand dollars' worth a day?" Sandy said with a straight face. "That sounds about right for you, chow hound."

Jerry clipped the tall, slender boy on the arm with his knuckles. "Calories, you dope! Don't get smart."

"I'll bet neither one of you knows what a calorie is?" Quiz said dryly.

Sandy's forehead puckered up thoughtfully. "I think I do. It's a unit of energy, isn't it?"

"That's close," Quiz admitted. "It's the amount of heat—heat is energy—required to raise the temperature of one gram of water one degree Centigrade."

Jerry nudged Russ Steele. "Bet you didn't know that, General Steele?"

Russ smiled good-naturedly. "I had a vague idea it was something like that. Let's find the office. I used to know the foreman of this camp."

The boys eyed the lumberjacks admiringly as they walked by the mess hall. Most of them were stripped to the waist, their muscles bunching and rippling in their sun-bronzed arms and torsos as they moved about. The cuffs of their sweat-blackened levis were tucked into the tops of hob-nailed boots.

"Let's recruit a couple of these bruisers for the Valley View football team. Our line would be a stone wall for sure," Jerry whispered to Sandy.

Russ took them around the end of the mess hall to a small frame shack in the middle of the camp. A big collie was sitting in the open doorway. Instinctively, Sandy reached down and got a hold on Prince's collar.

"They won't fight," Russ told him. "They're old friends."

The collie, recognizing Russ, came bounding out of the shack and leaped up on his chest, trying to lick his face. Russ pummeled him in the ribs playfully. "Bruce, old feller, how are you?" He looked up as a short, squat, bald-headed lumberjack appeared in the doorway. "Well, Jonas! I figured they would have retired you by this time."

The man's broad face lit up. "Russ Steele! You

old dogface! What are you doing here this time of year?"

"Brought my nephew and a couple of his buddies up on a camping trip. Boys, I'd like you to meet Jonas Driscoll, the toughest bull-of-the-woods who ever swung an ax."

After the introductions, Jonas took them through the back door of the mess hall while the two dogs chased each other around the compound. "I'll have Cookie fix them up a grand feed from the left-overs," he said.

Sandy felt self-conscious as Jonas cut in at the head of the line and picked up metal compartment trays and silverware for each of them. "Won't those other guys get sore?" he asked, as they walked away from the serving table.

Jonas laughed. "Naw, you're company. Anyway, they'd be scared I'd flatten 'em if they kicked."

There were about twenty wooden tables with benches running down each side of the mess hall. Jonas led them to a table at the rear that was almost empty. Salt- and pepper-shakers and clean cups were stacked in the middle of each table. As they sat down, Jonas motioned to one of the mess boys, a gangly youth about sixteen. "Let's have a couple of pitchers of iced tea here, son."

Jerry gazed bug-eyed at the five pork chops and

the mounds of mashed potatoes, vegetables and apple sauce heaped up on his tray. "This is lunch?"

Jonas Driscoll's blue eyes twinkled. "Just a light snack, son. Wait till you eat supper."

"Oh boy!" Jerry breathed rapturously.

"You ought to sign him on one of your crews, Jonas," Russ suggested.

"He's light on muscle—except between the ears," Sandy said, "but he's got the appetite for it."

"I can't get sore with all this lovely food in front of me," Jerry said, as he went to work with knife and fork.

"You been a lumberjack long, Mr. Driscoll?" Sandy inquired.

"Fifty years last May. Started in as a cook's helper when I was thirteen. And I expect to be at it another forty."

Russ looked across at his old friend fondly. "Logging is still a rugged business, but nothing like it used to be in Jonas' prime."

"I'll tell the world," the foreman agreed. "Electricity and the gasoline engine have taken all the work out of it."

A kibitzing lumberjack at the end of the table held up his hands, thick with calluses. "Is that *so!* Well, suppose you tell 'em where I got *these!*"

Jonas laughed good-naturedly. "You're right, French. Them bulldozers and power saws don't

help you sawyers much—not in this camp anyway." He turned to the boys. "They're the boys who swing the axes and pull the big cross-cut saws."

"Don't all lumberjacks cut down trees?" Quiz wanted to know.

"Not exactly. There's a lot of different jobs in logging just like in any other business. There's sawyers, high riggers, yarders and river hogs. After lunch, I'll take you out to the stand we're cutting now and show you around."

CHAPTER SEVEN

A Birling Match

IN SPITE OF THE FACT that Jonas Driscoll kept insisting that all the glamour had gone out of logging, Sandy and the boys found the business of cutting timber fascinating. The husky lumberjacks were amazingly thorough and efficient. Jonas pointed out one massive pine, at least three feet in diameter, that seemed to be the object of heated discussion among the sawyer gang. Long strings with leaded weights dangling at the ends were fixed on the trunk at various heights to determine the tree's angle to the ground.

"Them plumb lines help 'em figure out which way that old feller would fall naturally," Jonas explained. "Then they got to take the wind into account and the distribution of the foliage, plus a few other things. After that the gang boss decides how to make it fall where he wants it to."

"What difference does it make where it falls?" Jerry asked.

"Well," Jonas drawled, "a big feller like that could squash a whole crew if it fell wrong, for one thing. Or it could end up leaning against another tree, which is kind of messy." He pointed out a stand of seedlings to the left of the big tree. "Or it could break up a lot of those babies; that'd be cheating your grandchildren out of some fine timber. A good crew boss can drop a tree smack on a little wooden stake and hammer it into the ground."

Quiz looked impressed. "I'd say your crew bosses must have a thorough knowledge of mathematics to be able to predict the angle of fall so accurately."

Jonas scratched his bald head. "Well, I don't know, son. I suppose quite a few of the boys these days have book learnin'. 'Course, in my day, the way you made crew boss was to lick the old boss."

"Did anybody ever lick you, Mr. Driscoll?" Sandy asked.

The old man drew back his lips, displaying two rows of broken teeth. "A couple of times, as you can see."

They walked closer to the big pine tree as two muscular sawyers started to make the undercut that would determine the direction the tree would fall. The chips flew as their double-edged axes flashed in the sunlight, and a wedge widened rapidly in the side of the trunk. Their strokes

were rhythmic and effortless. Jonas called their attention to the smoothness of the undercut.

"Good men," he said. "The scarf is as clean as if it was cut by a saw."

When the undercut was completed to the crew chief's satisfaction, two other men went to work with a wicked-looking two-handled saw with a curved blade.

"We better mosey back to the sidelines," Jonas told them. "Mistakes do happen."

From a safe distance they watched until, at last, the tree began to tremble throughout its length like a live thing. Before the saw was completely through the trunk, there was a grinding, crackling noise and the crown swayed and dipped. Suddenly there was a sharp report that Sandy first mistook for an explosion.

"She's falling!" Jonas said.

"Tim-m-ber!" the crew boss sang out at the top of his lungs as the great tree toppled slowly and majestically. It landed with a thunderous crash that blurred Sandy's vision and jarred his teeth. And then, for a full minute, it lay there, writhing and groaning like some prehistoric monster in the throes of death.

The boys were awed.

"I never saw anything like it," Jerry whispered.

"It sort of gives you a lump in your throat," Quiz said, his voice touched with reverence.

"That tree was probably hundreds of years old. Now it's gone."

Jonas dropped one hand on the boy's shoulder. "Not really. That old tree will help build a lot of fine houses and furnish 'em too. Studding, shingles, chairs, tables, cabinets, the works."

Immediately, another crew with light power saws began cleaning the limbs off the trunk.

"Soon as she's limbed," Jonas explained, "they'll cut up the trunk into manageable lengths and the dozers and cranes will stack 'em in cold decks." He indicated a neat pile of logs at one side of the road. "In the old days we had to let them sit here until winter when the roads were iced over, so they'd slide easy behind the horses. Today, we use trailer trucks."

"Makes it a lot easier on everybody, doesn't it, Jonas," Russ Steele said. "Now, tell the truth, the 'good old days' weren't really so good, were they?"

The old man grinned sheepishly. "Well—we got the job done just the same," he said lamely.

Tractors, with thresher-like attachments, moved back and forth along the length of the felled tree, gathering up the lopped-off branches and chewing them up into smaller pieces. These scraps were later heaped up into mounds.

"Come winter, we'll burn a lot of that slash and spread the ashes around for fertilizer," Jonas explained.

"Must be quite a fire hazard in this weather," Russ Steele said.

The foreman's mouth tightened. "This heat spell has everybody on edge. It's getting so I wake up every half hour at night, thinking I smell smoke. We been posting fire watches out here on our own. Them poor rangers got their hands full as it is. You really picked a bad time to go camping, Russ. You going back to Red Lake from here?"

Russ smiled evasively. "Oh, I don't know. We thought we might go up to the border and watch your boys run some of these logs down the big river."

Jonas shook his head. "Water level's too low. You boys want to see a gen-u-wine logging drive, come back up here next spring."

Sandy was disappointed. "I sure hoped to see that. Do lumberjacks really ride on top of the logs the way you see it in the movies?"

Jonas raised an eyebrow. "I'll say they do, son. Why a good river hog can ride a fresh pine log through the mill tail as pretty as a Hawaiian on a surfboard. Say, maybe we can put on a bit of a show for you at that. C'mon."

He led them down the slope toward a small pond nestling in the valley. On the way, he called to two loggers stacking logs.

"Pete! Charley! Want to show off your birling for our visitors?"

Wearing big grins, the two husky men fell in behind them.

"Pete and Charley are the camp champs," Jonas explained.

"What's birling?" Quiz asked.

"A game the old-timers dreamed up to pass the time on long drives. Two men set themselves on opposite ends of a log and then they try to shake each other off into the drink."

"Oh, boy!" Jerry said. "That sounds like fun."

"It is fun," Jonas agreed. "But it's also become quite a skillful sport. Wait till you see these boys go at it."

When they reached the pond, Pete and Charley carefully chose a log about two feet in diameter and twelve feet long from a pile nearby and rolled it into the water. Then they stepped onto opposite ends of the log and Jonas shoved it into the middle of the pond with a long pole. The two big men, hobnailed boots planted firmly in the bark, rode the bobbing log like cats, their thumbs hooked nonchalantly in their belts.

"Looks easy," Jerry said.

"Don't kid yourself," said Quiz.

At a signal from Jonas, the contest began. Pete took the offensive at once. Back-pedaling with

short, mincing steps, he sent the log rolling over and over in the water. Faster and faster his feet moved until the log was a spinning blur beneath them. But Charley jogged effortlessly with the spin, never once removing his thumbs from under his belt.

"He must be part fly," Sandy murmured admiringly.

Suddenly, Pete braked the log with his spikes. Charley hung on nimbly, though he did have to extend his arms for balance. Pete studied his opponent briefly, then tried another approach. Facing the other man, he spread his feet, spikes dug deep into the soft bark. Throwing his weight to the right, he rolled the log to that side, then jerked it back sharply in the opposite direction. Back and forth, back and forth, he went, stirring up waves in the little pond. Charley just crouched low and rolled with the log.

Finally, Pete abandoned this method too, and began to jump up and down on his end of the log until it was lurching up and down in the water like a seesaw. Once Charley's boot slipped as the log rolled unexpectedly, but he recovered himself neatly.

"I've never seen such a display of balance and coordination," Russ said.

"There's a hundred tricks," Jonas told him. "Every birler has his own pet twists and turns and

stops. Why I've seen my old man spend hours studying a log before a big match."

"What for?" Sandy said. "They all look pretty much the same to me."

"Logs are as different as fingerprints. Pine logs are lighter than spruce, for example, and roll much faster. Cedar logs ride higher in the water. Thin bark is a different proposition than thick spongy bark—" He broke off as the two birlers both sent the log spinning madly in the water. "Here now, watch old Charley go to town."

Faster and faster the log spun; then with a display of skill that set Jonas to clapping his hands, Charley braked the spin and sent the log twirling in the opposite direction before poor Pete could shift his feet. He flipped over backward into the pond with a loud splash.

The boys joined in the round of applause for Charley, as Pete surfaced and good-naturedly shoved the log in to shore, so the winner wouldn't get his feet wet.

"I'm out of practice," Pete puffed, as he waded in, dripping wet.

"No excuses," Jonas laughed. "Anyway, that saves you taking a bath tonight."

He turned to Jerry. "Still think it's easy, young fellow?"

"Well-l-l," Jerry drawled, "I think with a little practice I could do it."

"No time like the present," Jonas declared. "How about it, Sandy? You game to take your pal on?"

Sandy grinned. "Sure thing. I don't care if I do fall in. It's so darned hot."

Jonas brought the log in closer to the bank and braced it with his pole. "Okay, boys, climb aboard."

Sandy bowed with a flourish to the dark-haired boy. "After you, my dear Alphonse."

Stepping out on the log as cautiously as a tight-rope walker on the high wire, Jerry planted his feet firmly, crouching very low.

"Why don't you sit down and straddle it," Quiz heckled him.

"No remarks from the gallery," Jerry grunted. "I'm just getting the feel of it."

Sandy took his place a trifle more confidently, and Jonas shoved the log into the middle of the pond. Jerry tottered and flailed his arms wildly in the air as the log started to roll beneath him.

"Hey, cut that out! We didn't get the signal to start yet," he protested to Sandy.

"I'm not doing a thing." Sandy was concentrating on keeping his feet moving rhythmically with the motion of the log. In spite of his efforts to slow it down, it kept picking up momentum, largely because of Jerry's frenzied footwork.

On shore, Quiz, Russ Steele and the loggers

were doubled up with laughter. Jonas gasped, "He looks like a clown I saw at a circus running on a treadmill with a dog hanging onto the seat of his pants."

The thought was too much for Sandy. Choking hysterically, he went headfirst into the pond. But still Jerry's mad marathon went on. "How do you stop this thing?" he shouted.

"Just turn off your ignition," Charley joked.

The tears were rolling down Pete's face. "I ain't seen a birler like that boy in all my days. He'd be a sensation at the fall festival."

"No use," Jerry screamed desperately. "I'm going to bail out before it's too late." Holding his nose he ran off the end of the log into thin air. His legs were still driving like pistons as the water closed over him.

When the boys waded ashore, Jerry grinned sheepishly at the loggers. "I was doing great till my accelerator got stuck."

Jonas patted him on the back. "You're all right, Jerry. Best show I've seen all year."

Walking up the hill, Jonas asked Russ, "How long will you be with us?"

"Oh, I guess we'll be heading back to Red Lake tomorrow morning."

"Better follow the river south as far as you can," Jonas cautioned him. "It wouldn't do to get caught in the deep woods if a fire gets started."

By this time the sun had sunk below the trees, and the loggers were boarding the trucks for the ride back to camp. Russ and Quiz rode back with Jonas in the cab of the lead truck, while Sandy and Jerry piled in the one behind it.

"Do you fellows live in the woods all year?" Sandy asked the driver.

"Most of us single men do," the driver told him. "It saves board money living in the company barracks and eating three squares in the mess hall. A few of the married boys live in town. We got a couple of little towns within a comfortable distance. Some weekends we go in and stay at a rooming house."

"Don't you ever get to the big city?" Jerry asked wonderingly.

"Maybe once a year, we go to Duluth." He began to laugh uproariously. "It usually takes us another year to get over a spree like that."

Back at camp, Russ Steele spoke earnestly with Jonas Driscoll off to one side. Then he went into the office alone and closed the door behind him. The foreman walked over to where the boys were throwing sticks for the two dogs to fetch and told Sandy that his uncle was making an important phone call.

"He'll be a while," he said. "Why don't you boys come down to my shack and wash up before supper?"

Sandy looked meaningfully at Jerry and Quiz. "You guys go ahead with Jonas. I'll be along in a few minutes."

As soon as they were out of sight, Sandy went over and sat down on the steps of the office. Prince and Bruce camped at his feet, wagging their tails and pleading with their eyes for more play. Finally Sandy gave in and lobbed a few more sticks for them. After about ten minutes, Russ Steele came out of the office. He was so preoccupied with his thoughts that he almost stumbled over his nephew.

"Sorry," he apologized. "I didn't see you."

Sandy nodded sympathetically. "Still no news?"

"Not a trace. It begins to look more and more as if they ditched the bomb over this area. Search teams are working in toward us methodically from both Lake Superior and Manitoba where the plane crashed. We'll just have to do what we can until reinforcements arrive."

To the west heat lightning lit up the sky like a monster flash bulb. Sandy shivered as they walked slowly in the direction of the foreman's cottage. The air seemed to be buzzing with electricity.

CHAPTER EIGHT

Fire!

AFTER BREAKFAST the next morning, Russ Steele and the boys said goodbye to Jonas Driscoll and started back in the direction of Red Lake. Once again they fanned out at 1500-foot intervals, as soon as they were out of sight of the logging camp.

"It seems like such a waste of time," Jerry complained. "We're never going to find that bomb, just four guys in a big woods like this."

"Most likely we won't," Russ admitted. "Our team is only a small cog in the vast search machinery, but the ultimate success of the operation depends on how well each small team does its job. The military doesn't expect us to march straight to where the bomb *is* and say, 'Here it is, fellows!' What they do expect is for us to be able to say with certainty where the bomb is *not* lying. Gradually, by a process of elimination, they'll be able to pinpoint its exact location."

The trek south was just as unrewarding as the trek north. They covered twenty-five miles by

dusk, when they made camp and cooked a simple supper of beans and bacon. The boys were so weary that they sacked in before it was completely dark. Russ Steele sat outside awhile smoking his pipe and watching the moon climb into the cloudless heavens.

In the early afternoon of the following day, they arrived back at the ranger station. Dick Fellows signaled them with a flashing mirror from the tower when they were still a half mile away. By the time they arrived, he had a pitcher of iced tea frosting on the table.

"No luck," he said flatly, as soon as he saw their faces.

Russ shook his head. "How about yourself? Still no rain in sight?"

The ranger sighed. "Just got the forecast before you got here. Fair and hot for the rest of the week. I've been on twenty-four-hour duty for the past two days. Headquarters has declared a state of emergency."

"Why don't you grab a couple of hours' sleep?" Sandy suggested. "We'll keep a careful watch for you."

"Thanks," Dick said, "maybe I will. I've been sleeping with one eye open these nights, and one ear on the alarm clock. How long are you fellows going to stay around?"

"Until tomorrow morning," Russ told him.

"We'll cover the ground between here and Red Lake next trip."

It was 2:30 P.M. Dick Fellows had been asleep for about an hour. Quiz and Jerry had left to take a bath in a nearby stream. Russ Steele was relaxing in the big easy chair with his pipe and a book from the ranger's library. Sandy was on watch. Standing at the north window, he swept the horizon from east to west with a pair of binoculars. Three-quarters of the way across, he stopped and trained them down on a tall trunk that stood out bleak and spare against the thick foliage of the other trees. With a frown, he dropped the glasses and blinked his eyes, squinting through the distant haze.

"Uncle Russ," he said steadily, "it's probably an illusion, but I think I see smoke."

Russ Steele rose quickly, dumping the book off his lap onto the floor. "Where?" he asked tensely, coming to the window.

Sandy passed the binoculars to him. "That big snag due north-northwest." While his uncle was studying the location, Sandy went back to the table and picked up a pair of sunglasses specially treated to penetrate haze. "Well, what do you think?" he asked.

"I'm not sure," Russ said tightly. "It could be heat waves shimmering through the ground haze." He turned to look at the sleeping figure of the

ranger on the bunk. "In any case, I think it rates the attention of an expert. Better wake Dick."

Dick Fellows sat up promptly the instant Sandy's hand touched his shoulder. "Trouble?" he asked grimly. He was at the window focusing the binoculars before Sandy had finished explaining. After a brief look, he put down the binoculars and studied the trouble spot through the haze glasses.

Then he announced matter-of-factly: "Smoke, all right. Well, we've got ourselves a fire."

His voice sounded almost relieved. The waiting and the anxiety were over now, at least. The enemy was out in the open—something tangible you could see and fight.

Immediately, the ranger made a compass reading. Then he took a fix on the smoking tree with an Osborne fire finder, an instrument roughly resembling a sextant.

"The fire finder measures both horizontal and vertical angles," he explained to Sandy. "If we know the height of the fire tower and the angle of the fire with respect to the top of the tower, it's a relatively easy matter to locate the site on a good topographical map."

"What's a topographical map?" Sandy asked.

"A map that charts the surface features of the terrain," Dick said. He went back to the table and made some rapid calculations on a pad,

stopping occasionally to measure off distances and angles on the big map spread out before him. At last he stuck a red pin at an *X* that marked the intersection of two lines. "That's where she is," he said with finality. "Now I'll radio the news in to headquarters. They'll try and get a sighting from another tower and double-check my fix on the fire."

"What do we do in the meantime?" Russ Steele asked anxiously. Sandy could see that, underneath the heavy tan, his uncle was pale. He had a flitting mental image of the missing A-bomb lying in some desolate part of the forest with flames licking in all around it, and he felt the short hairs at the base of his skull bristle.

"I'll go straight to the fire and see what I can do until a crew shows up," the ranger said.

"You've got yourself a crew," Russ volunteered. "What can we do to help?"

Dick Fellows smiled gratefully. "That's wonderful. I've got plenty of tools stored out in the shed. With any luck, maybe we can get it under control before it spreads too far."

At that moment, they heard Prince barking at the foot of the tower and footsteps vibrating on the metal steps. "That must be Quiz and Jerry," Sandy said. He ran to the door, opened it and called down. "Stay where you are. We'll be right down. We're going to fight a fire."

Within fifteen minutes, the five of them were double-timing it through the woods, loaded down with long-handled shovels, burlap sacks, fire swatters and strange-looking implements that the boys had never seen before. One resembled a giant fly swatter; another, the Pulaski tool, was a combination ax and grub hoe. They had covered, perhaps, ten miles, when Prince, who had gone running far ahead, began to yelp excitedly. Before they even sighted the flames, they could hear the crackle and roar of a formidable blaze.

Dick Fellows ran his tongue nervously over dry lips. "Not much smoke. She had a good start before we spotted her."

In spite of the ranger's words, Sandy felt a wave of relief when they finally reached the fire. It didn't look nearly as bad as he had expected it to be. At most, it ranged over a quarter of an acre, blazing lazily in the surface litter that covered the forest floor.

"Gee, it's just a little brush fire." Jerry echoed his friend's sentiments.

"So far," the ranger said grimly. "But all it will take is a little breeze—" He left the thought unfinished, as without warning a dead tree that stood in the center of the fire, blackened and smoldering, burst into flame like a torch. The rotten wood gave off great flaming sparks that were carried high into the air by the updraft. Sandy traced the

journey of one glowing ember as it plummeted down like a shooting star into the woods about a half mile away.

"That could mean more trouble," the ranger said. "Before you know it, you have a half dozen spot fires burning in addition to the one you're fighting. I'll have a look over in that direction later on. The first thing we're going to do is to build a fire line across the head of the fire; I'd say maybe fifteen feet in front of it."

Quiz nodded. "The head of the fire is determined by the direction in which it's spreading the fastest. Right?"

"Right. All fires have a roughly circular shape to begin with. But depending on air currents, slope of the terrain and available fuel, they soon take on direction. Usually they assume an elliptical shape, sort of like an egg, with the fat part of the egg representing the head. We always attack the head first—stop the advance. Then we can work down the flanks to the rear.

"Our fire line will be about one hundred feet long. I'd say this particular fire calls for a trench about two feet wide through the duff and litter; we've got to get down to mineral soil. Everything inflammable must be cleared off this path. Bushes or low-hanging branches that the flames can reach have to be removed or avoided."

At this point, he stopped talking to lay out the

fire line, tracing its path through the forest with a hoe. It was a zigzag route which detoured around bushes that were too large to be uprooted and low-hanging tree branches. "We avoid anything that would give the flames a chance to leap the fire line," Dick explained.

As soon as the boundaries were clearly defined, he distributed the tools and assigned specific jobs to everyone. Russell Steele showed as much respect for the young ranger as any enlisted man had ever accorded a general. Sandy and Jerry worked with the hoes, breaking the first ground. Their job consisted mainly in clearing a swath through the loose litter, shoving it in toward the advancing flames.

Dick Fellows and Russ Steele came in back of them with Pulaski tools, hacking out stubborn roots and small shrubs and cutting deeper into the duff. Quiz brought up the rear with a shovel, scooping up loose matter that had tumbled back into the ditch and sluicing a light layer of soil across the ground in front of the line. They worked intently, without speaking, to conserve their wind; and the line grew rapidly. Still, the fire was within two feet of the barrier when Quiz sent the last shovel of dirt rattling into the waist-high flames.

The heat was searing, and their lobster-red faces streamed with perspiration. Their clothing

was soaked and streaked with dirt. Jerry and Quiz staggered back from the line and collapsed on the ground.

The ranger waved Sandy and his uncle back too. "Better take a breather," he warned them. "The worst is yet to come." He took a long drink, then emptied the rest of his canteen over his head.

After a five-minute break, Dick passed out the long-handled beaters to the three boys. He handed Russ Steele a burlap bag soaked in water. "We'll do the best we can with these. The idea is to patrol the line and keep a sharp watch for embers that fly over it."

They stationed themselves at 25-foot intervals, with Russ and Dick each holding down an end of the line. The flames reached the edge of the break and leaned hungrily across it.

Sandy brought the flat of his rubber beater down on a spark that kindled on his side of the line. "It gives me the creeps the way the fire seems to be reaching out for you," he yelled to Jerry. "It's almost as if it was alive."

Jerry was too busy swatting to answer him. Down at one end of the line, Dick tossed aside his smoking burlap sack and grabbed a shovel. With horror, Sandy saw a thin trail of fire race along the edge of the ditch, skirt the end and blaze up in a patch of grass around the ranger's legs. Sandy dashed down to attack the breach with Dick, and

together they extinguished the flames and the long fuse of burning grass that had kindled it.

"Thanks," Dick gasped, as Sandy raced back to beat at a fiery tongue that was licking at the brush in his sector.

For at least a half hour they battled the tenacious foe, and then the flames began to subside, their frantic efforts to leap the line growing more and more feeble.

At last Dick Fellows anounced hesitantly, "Looks like we have her, men."

The boys let out a lusty cheer, and Jerry did a comical little waltz with his long beater. But their exultation was short-lived. For some time, no one had paid much attention to the dead tree in the center of the burned-out area, now a solid pillar of fire reaching into the sky. The ranger had been relieved to note that it stood a safe distance apart from the other trees, and he decided that its chief hazard lay in the sparks that kept rising intermittently from it. Then disaster struck.

Crumbling from decay and the ravages of termites, and further weakened by the flames, the towering snag unexpectedly gave way at the base. As the fire fighters stared in hypnotic fascination, the tree toppled in slow motion toward a thick cluster of pines on the left flank of the fire. It went crashing down into their midst, sending a spray of sparks and flame over the thick, dry foliage. In-

stantly the crowns of the trees erupted simultaneously in a huge balloon of flame with a noise like an exploding bomb. A blast of red-hot air singed Sandy's hair and eyelashes and sent him stumbling backward with his hands over his face. Rejuvenated, the front of the fire leaped the barrier and blazed up beyond control at a dozen separate points.

"She's crowned!" the ranger yelled in despair. "That snag did it. The surface fire had heated the foliage to the point of combustion and it was just like touching a match to a gas jet."

Sandy was aware of a strange rustling in the trees overhead. "What's that?" he asked the ranger. "It can't be wind."

"It's wind all right," Dick told him. "Once these fires get really going, they make their own wind."

"It's simple," Quiz explained. "You can even feel it standing near a big bonfire. The updraft of hot air creates a partial vacuum over the fire area, sucking in cool air from all around it."

"What do we do now?" Russ demanded.

The ranger pointed to the crown fire, which was spreading from tree to tree fairly rapidly. "Only thing to do is get out of here. We don't want to get caught if this thing really takes off. There's a firebreak about one mile back, where we can wait for reinforcements."

He glanced up at the sky, and for the first time

Sandy was aware that a helicopter and a small observation plane were circling the area. "They should be rallying a gang up there within a few hours," Dick said.

"What's a firebreak, Dick?" Quiz asked.

"A king-sized fire line similar to the one we made. It can be anywhere from ten feet to a hundred feet wide. Nowadays critical areas are interlaced with firebreaks, just in case. The one we're heading for is a road really; the idea is to take advantage of natural defenses as much as possible when planning firebreaks—roads, rivers, clearings, railroad right of ways."

As they followed the ranger at a slow trot in the direction of the road, Prince leaped out from behind a bush and fell in beside Russ.

"I was beginning to wonder what had happened to him," Sandy said.

"Animals are deathly afraid of fire," Russ said. "I'm surprised he isn't on his way back to Red Lake."

Jerry snorted. "Some hero! And I thought dogs were supposed to be fearless."

Russ looked at Jerry solemnly. "Only fools are fearless. I can tell you I'm plenty scared right now —for more reasons than one."

CHAPTER NINE

Battling the Flames

BY THE TIME they reached the firebreak, men and trucks were streaming down the dirt road from both directions; rangers and volunteers from the logging camps and small towns in the area.

"Do we sit back here like soldiers in trenches and wait for the fire to come to us?" Sandy wanted to know.

Dick Fellows shook his head. "It's not likely. That's too much timber to give up without a fight. Most likely the fire boss will try and contain the fire within some area much closer to the front. We'll construct another fire line—a lot bigger than the one we made, of course—and backfire from that, probably."

"Backfire?" Jerry looked puzzled.

"Yes, light more fires all along that line." He had to smile at the boy's incredulous stare. "Fires that we know we can control. It's the only way to

stop a running crown fire. A running fire picks up a lot of momentum—you saw how those flames jumped our line. The idea is to light the backfires right on the edge of your fire line so that they'll burn in the opposite direction, toward the main fire. Actually, the air currents created by a big blaze tend to draw in the smaller backfires. Under ideal conditions, the two fires meet head-on and die because all the fuel has been exhausted."

"That's a fascinating image," Russ said. "Like two greedy monsters destroying each other."

"Now I know where they got that old saying about fighting fire with fire," Sandy said.

"That's right," the ranger acknowledged. "It's an old trick that goes back earlier than the Christian era. Tricky business, though, and you have to have a gang that knows what it's doing every second. If anything goes wrong, the backfire may get out of control and leap the fire line itself."

He looked up as a tall gray-haired man in riding breeches and high boots got out of a truck on the far side of the road and hailed him.

"Dick Fellows! How does it look?" the tall man came across and joined them.

"Hi, Paul! Not too good. We thought we had her for a time. Then everything burst loose."

He introduced Paul Landers, the district ranger

chief, to Russ Steele and the boys, describing their unsuccessful effort to stop the fire before it crowned.

Landers shook his head grimly. "Nice try, anyway, Dick. And many thanks to you, General Steele, and the boys, for lending a hand."

Russ smiled. "Anything else we can do? We're still available."

The fire boss took off his ranger hat and mopped his brow with a handkerchief. "Plenty to do, all right, General. Soon as they get my headquarters tent set up over there, we'll be having a meeting of crew chiefs. I'd welcome it if you'd sit in. You ever had any experience fighting fires? Before today, I mean?"

"I'm a greenhorn," Russ admitted. "Just like the boys."

"But we're learning fast," Jerry chimed in.

Landers laughed. "Good. That tent's up now. Come along and I'll show you how we map out our battle strategy." He glanced at Russ. "You're going to find, General, that a forest fire can be as diabolical and treacherous as any human enemy you ever fought."

"I'm beginning to suspect that already," Russ said somberly.

Inside the big pyramidal tent, technicians were installing short-wave radio equipment, electric lights and telephones. On a large square table in

the center of the tent, a topographical map was spread out; alongside it was a vivid aerial photograph of the same region.

Landers indicated a section on the map shaded in red pencil. "This represents the burned-out area, as it stands at this time. Roughly, the front is about twelve hundred feet across, and she's spreading fast."

Dick Fellows whistled. "I'll say she's spreading fast. I don't figure it was more than a hundred feet when we pulled out."

The fire boss bent over the map and rested both elbows on the table. "She's got all the makings of a Class E fire all right."

"What's a Class E fire?" Sandy asked.

"Forest fires are rated in five classes, A,B,C,D, and E, according to the size of the burned-out area," Landers explained. "Class E is three hundred acres and up. This one could be a first-rate Class E if it gets away from us. So we can't afford to take chances."

He studied the map thoughtfully. "The way I see it we've got to give her plenty of room. If we can hold her down to two hundred acres, I'll be plenty satisfied." He ran his finger along a ridge that ran off diagonally to the road in a northeast direction on the right flank of the fire. Then he penciled an *X* at the foot of the ridge directly in line with the head of the fire.

"Our best chance is to start backfiring here, about a half mile due east. That ridge is a natural firebreak because it's mostly rock with only scrubby vegetation. It won't take more than a skeleton crew to work that side."

He addressed two of the gang bosses: "Harry and Ed, you boys take ten men and a bulldozer and start setting things up on that ridge. A three-thousand-foot line should do it."

Now from the foot of the ridge, he drew a line extending in a southeast direction, so that between them they formed an angled pocket into which the fire was advancing. "We'll backfire for another three thousand feet on this line. The rest of you gang bosses will round up your men and get to work on that immediately."

He singled out Dick Fellows. "Dick, you and your three young friends can help out on the south line, if you will, as fire scouts. General Steele, I'd appreciate it if you would help me get things organized here."

The boys followed Ranger Fellows out of the tent as the gang bosses crowded around the table for a question-and-answer session with the fire boss and to get a final briefing. Sandy was surprised to see that dusk was settling over the forest. He looked at his wrist watch and saw that almost five hours had passed since he had spotted the first thin swirl of smoke from the fire tower. To the

west an enormous golden cloud hung over the trees like a halo.

"Doesn't that look beautiful?" Jerry said.

"Deadly beauty," the ranger told him, explaining that it was the last rays of sunlight slanting up from below the horizon on the screen of smoke drifting up from the forest fire.

He led them over to the mess tent, where cooks were doling out steaming-hot suppers to the fire fighters from big insulated containers. "Eat hearty, men," he said wryly as they took their places on line. "We have a long night ahead of us."

"How can anyone work in these woods at night?" Sandy said. "It gets so dark you can't see your hand in front of your face."

"It's not easy," the ranger admitted. "Normally, Landers would wait until daylight to tackle most fires. The rate of spread drops sharply through the night, then picks up again when the sun rises. Dawn and early morning are generally the best hours to work. But conditions being what they are —this drought and all—the chief wants us to keep on top of it every minute. It won't be any picnic, though, building that south fire line at night, even if they mount auxiliary spotlights on the trucks and tractors."

"What gives with this fire scout business?" Jerry wanted to know. "What do we do?"

"Run messages up and down the line so that

headquarters can keep in touch with the progress on all sectors at all times," Dick explained. "I'll be stationed at the junction of the north and south lines with a walkie-talkie radio. You fellows will relay reports from the gang bosses in to me, and I'll call them in to the chief." He grinned. "You're going to be mighty leg-weary before this is over."

At the head of the serving table, a grizzled old man wearing a greasy undershirt handed them each a tin plate and a knife and spoon. In quick succession, Sandy received a ladle of hash, a ladle of cole slaw and a slab of bread—at least two inches thick—slapped on top of it all. The last man on the serving line dipped a tin mug expertly into a galvanized can filled with iced tea and sent him on his way. Sandy had intended to ask for something to eat for Prince, but then he saw that the big Doberman was squatting patiently before the entrance of the headquarters tent, waiting for Russ Steele.

When they had finished eating, they scraped their platters clean and dropped them in a tub of soapy, boiling water to one side of the mess tent.

It was almost dark now, but the area was bright in the glare of spotlights that had been rigged up to the heavy power line strung from poles at the side of the road. Dick Fellows stopped briefly at headquarters to pick up his walkie-talkie radio,

and then they hitched a ride on a jeep truck. They were part of a long caravan of vehicles moving slowly through the woods toward the foot of the ridge where the fire line would be anchored. The boys could scarcely believe that a road had been cut through the timber in such a short period of time. True, it was rutted, and bristled with stumps, and twisted considerably to avoid the biggest trees, but it was quite an accomplishment nevertheless.

"It's magic," Jerry exclaimed. "How did they do it?"

"Bulldozer magic," the ranger said, pointing to the broken and uprooted trees littering the sides of the road. "We even have some brush-breaker trucks that can plow through a grove of trees up to six inches in diameter as if they were matchsticks."

The caravan ground to a halt before they reached the foot of the ridge, so the dozers and tractors could complete a huge clearing where the vehicles and equipment could assemble. To Sandy, it was a scene of immense confusion and noise. It seemed to him that the gang bosses were trying to outshout each other; the men were getting in each other's way; and the trucks and tractors were rumbling about aimlessly.

"What a mess!" Jerry groaned.

The ranger grinned. "It just looks that way. This is as smooth an operation as I've ever seen. Wait till they get rolling."

And in no time at all men and machines were peeling off in orderly fashion to the right and left; up the ridge to the northeast; and southwest through the forest, clearing a strip through the trees the width of two bulldozers.

Behind the dozers came the plows, rooting up the thick bed of duff on the forest floor; then the graders, piling up soil and sand in a high bank against the advancing flames. Working by the light of big spots mounted on trucks, agile volunteers—mainly high riggers from the lumber camps—climbed the trees along the edge of the growing line, lopping off low branches that hung across into the danger area.

"Just to make sure our backfires don't backfire on us," Dick Fellows said wryly.

The young ranger set up his command post in the headlights of a jeep; it consisted of a folding table, canvas chair and the walkie-talkie. Quiz was intrigued by the little battery-operated receiver-transmitter. Dick pulled the rod antennae out of the top of the little oblong case until they were fully extended, and flipped the switch. There was a crackle of static and a variety of other interference before he succeeded in getting through to Fire Boss Landers at headquarters. Reception was

poor and he kept his head bent close to the instrument. The boys were only able to catch snatches of the conversation. Finally he signed off and looked up.

"The chief just received a report from air observation. She's progressing pretty much according to type. About three-quarters of a mile wide at the head, and covering roughly one hundred acres. There's just enough wind to benefit us—keep the fire moving due east and restricting the spread at the rear. Unless the picture alters radically before morning, we've got her licked."

"That's great!" Sandy said.

Quiz glanced over the treetops at the faint reddish glow in the sky to the west. "It's not nearly so bright over that way now."

"You're right," the ranger agreed. "That's because the crown fire has died out. It's strictly a surface fire now. Of course if we get another scorcher tomorrow, she'll likely flare up again."

Jerry was peering anxiously through the thick forest in front of them. "You can just about see the flames now flickering over there."

"It's possible," Dick admitted. "She's only about a quarter of a mile off now." Ruefully, he surveyed the tall, stately pines in the grove opposite them. "It breaks my heart to think we're going to have to sacrifice all that timber."

"When do we go to work?" Sandy asked him.

"Right now. The chief wants to know how things are progressing all the way down the line and he wants a thorough report on the contour of the fire front. Sandy, suppose you work the ridge, and Jerry and Quiz can take the south line. Find the gang bosses and ask them how things are shaping up in their sectors."

Sandy climbed a steep rocky incline at the right of the clearing to the top of the ridge. From the crest, which was nearly forty feet higher than any of the surrounding terrain, he had an unrestricted view along the full length of the ridge. A full moon sitting on the very rim of the horizon lit up the scene like a big orange bulb. It was obvious now why Fire Boss Landers had chosen this site to construct the fire line. It was a natural barrier running straight as an arrow to the northwest, at least a mile long from tip to tip. Its rocky slopes, barren except for grass and stunted shrubs, swept down about a hundred feet on each side to the edge of the woods. The ridge was a great scar in the rich Minnesota earth left by some passing glacier millions of years ago.

Halfway along the ridge, Sandy could see the dozers rumbling back and forth over the crest, their headlights gleaming like the eyes of prehistoric monsters. He started toward them at a dogtrot.

When he reached the nearest gang, a big man who seemed to be directing the operation swung his flashlight full on Sandy's face. "Hi, son, what's up?"

Sandy explained that he was scouting for Ranger Fellows.

"I'm Ed Macauley," the gang boss introduced himself. "Everything looks pretty good from here. We're clearing a strip about ten feet wide just below the crest on the far side here. We'll start our backfires down there in that tall grass at the edge of the woods. Then for good measure we'll light another one along the top of the ridge."

Sandy was puzzled. "One thing I don't understand. Why are you making the fire line on the slope away from the fire?"

Macauley grinned. "Because fire burns a lot faster and picks up more momentum going uphill than it does going downhill." To illustrate, he took a long wooden match out of his pocket and lit it with his thumbnail. When he tilted the lit end down, the flame blazed up brightly, licking greedily at the unburned stem. Then he tilted the end up and the flame changed direction and flickered feebly at the blackened stub and finally died out. "See, there's less chance of the fire jumping our line if it's burning downhill."

Suddenly he frowned and poked his nose into

the air like a scenting hound. "Hey, you feel that?" He wet his forefinger in his mouth and held it up.

At that moment Sandy was aware of a cool, gentle breeze on the left side of his face. When Macauley spoke, his voice was tight as a bowstring.

"Wind's picking up, and it seems to be swinging around to the southwest. That could mean the fire will veer smack into this here ridge. . . . Hey, you better relay that news back to the fire boss fast. Maybe they're just wasting their time on that south line."

"Won't they realize the wind's shifting?" Sandy asked.

"Maybe not. On account of the elevation here, we'd feel it first."

Macauley handed the boy his flashlight. "Here, better take this so you don't stumble in the dark. And make it snappy."

Jerry had already returned with a report from the south line when Sandy stumbled into the bright lights of the clearing. Jerry was sprawled out on the grass at the command post while the ranger phoned his information into headquarters. Sandy interrupted Dick Fellows excitedly to announce the unexpected wind shift. And Dick was even more excited as he told Paul Landers about it.

Jerry shook his head skeptically as Sandy

plopped down beside him on the grass. "I don't think that fire is going to change direction. You should see it down near the middle of the south line. It's so close now that they can see to work by it."

Sandy shrugged. "Won't be able to tell for sure for a while. But that wind is definitely swinging around and picking up velocity—by the way, where's Quiz?"

Jerry jerked his thumb back across his shoulder. "He's back down the line jawing away with some of the gang bosses. By the time this is over, he'll be an expert fire fighter."

Sandy laughed. "Shakespeare to smoke-eating —that's our boy. The expert's expert."

Dick put the walkie-talkie down and turned to the boys. "Our aerial observer reports a definite wind shift to the southwest. It's still too early to notice any effect on the head of the fire, but it's an important development." He gazed skyward. "Just keep your fingers crossed that it doesn't really blow up. She'd probably crown again and that could mean spot fires almost anywhere."

"What are spot fires? You mentioned them before, but you never did explain what they are."

"In a stiff wind, great masses of flaming embers and foliage may be carried through the air for miles and start other fires far ahead of the original one. That's where the real danger exists for fire

fighters. Lots of times in a bad crown fire, men have suddenly found themselves completely surrounded by flames."

Sandy shuddered. "That's horrible."

"Anyway, it's nothing for us to worry about. We haven't had a big blow up this way in almost two months."

"Say, Dick," Jerry asked curiously. "Do they know for sure what started this fire?"

"Not with absolute certainty," the ranger told him, "but it's a pretty good bet that it was that lightning storm we had a few days back. Lightning is by far the leading cause of forest fires in the United States."

Sandy yawned and glanced at his watch. "Gee, it's almost midnight," he said.

"Why don't you guys catch forty winks in the back of that big van over there," Dick suggested. "I'll wake you up if there are any new developments."

At that instant, the walkie-talkie came to life. Dick conversed briefly with headquarters, then smiled apologetically at the boys. "Sorry, fellows, but that nap will have to wait. Landers has decided to hold up setting the backfires on the south line until we know for sure what's going to happen with that wind. Jerry, you take the word on down: Stand by with the flame throwers, but don't start backfiring until we get confirmation

from headquarters. No sense burning down any more timber than we have to.

"Sandy, you go down the ridge and tell Macauley and Roberts that they can start backfiring any time they're ready."

"Right!" the boys said in unison, and started off in opposite directions.

It was an eerie sight watching the men fire the grass with their flame throwers. Rapidly they moved along the top of the ridge with the cylindrical tanks strapped to their backs, the long metal nozzles spewing out jets of blazing gasoline that consumed everything they touched. Soon the entire crest was aflame. To the west, a towering column of smoke spiraled high into the moonlit sky, the glints of the inferno below shimmering on its underside. It reminded Sandy of the familiar mushroom cloud of an atomic blast, and with a sick feeling he remembered the missing bomb lying somewhere in these woods.

CHAPTER TEN

A Temporary Victory

SHORTLY AFTER 3:00 A.M. Quiz Taylor aroused Sandy and Jerry, who were asleep in the supply truck.

"Come on, they need us!" he told them excitedly. "The fire has really busted loose again."

Sandy sat up groggily, rubbing his eyes. "Whazza matter? Wha' happened?"

"There's a real southwester blowing up. The fire has crowned again—you should see it! She may leap the ridge!"

"Leap the ridge!" Sandy sat up ramrod-straight, jolted into full wakefulness. "Good night! Let's go!" He and Jerry slipped on their boots and laced them frantically.

The sight that greeted them as they leaped out of the truck was frightening. To the east, as far as the eye could see, the canopy of the forest was one massive sheet of writhing, twisting fire. Long, forked tongues of flame leaped high into the sky, whipped about by the strong breeze blowing from

the southwest. The head of the fire had veered off sharply and was attacking the ridge on a quarter-mile front which was widening every second.

The boys hurried over to Dick Fellows, who was talking into the walkie-talkie and scribbling frantically on a pad. As soon as the conversation ended, he tore off the sheet he had been writing on and handed it to Sandy.

"Make sure every gang boss on the ridge sees this," he said tersely. "If she crosses the ridge, they're to pull out their crews at once and retreat to the road. If this wind keeps up, we might not even be able to hold her there."

For the first time, Sandy was aware of the loose debris blowing across the clearing. As he took the paper from the ranger, it almost blew out of his hand. In the unburned portion of the forest, the treetops were rustling nervously. It sounded like a lament, Sandy thought.

Dick looked at Jerry. "We've pulled most of the men out of the south line already. Landers feels that we should abandon it altogether for the present. Suppose you run down there and notify them, Jerry. Tell 'em to report behind the ridge on the double. They need every man they can get. Quiz, you stay here in case anything else important comes in."

Sandy started up the crest of the ridge, but the ranger called to him, "Better circle around in back. It's pretty hot up there." He looked at the

surface fire advancing slowly through the underbrush toward the clearing on the flank of the big blaze. "It won't be long before we'll have to get out of here. Better send back a couple of boys to move those trucks off the line."

"Right," Sandy said, and circled around behind the ridge.

The protected slope was teeming with men and machinery. Bulldozers scurried up and down like huge beetles, clearing off everything inflammable. Tank-trucks were moving slowly along the foot of the slope, their crews sweeping big firehoses across the face of the forest. Trees were doused from crown to root. Other smoke-eaters with hoses were lined up on the crest of the ridge like soldiers, dwarfed by the monstrous flames that seemed to arch over them threateningly. Whenever a flaming bough or a mass of burning foliage came toppling to the ground nearby, they would train a jet of fine, foglike spray on it. Watching this panorama, Sandy was once again impressed by the fact that the fire behaved at times with what seemed like animal intelligence. Time and time again, treacherous fingers of flame would stretch out to the men, driving them back behind the safety of the ridge. One such streamer actually did dart across the crest like a snake, badly burning a dozer operator.

Sandy relayed the communiqué from Fire Boss Landers to all the gang chiefs. He found Ed Ma-

cauley about a half mile down the ridge. His crew had started to build a hasty fire line at right angles to the ridge in an attempt to stop the fire racing down the edge of the forest, but they had finally abandoned it.

"Nothing short of a miracle will stop her now," he told Sandy hopelessly.

"Isn't there anything we can do?" the boy asked, his voice tinged with panic.

Macauley shrugged. "Not till she runs into the big firebreaks. There's another road about two miles north of the ridge; runs east to west. With enough men we can bottle her up between the two roads. But she'll burn off better than a thousand acres before she's finished."

The fire was now abreast of where they stood on the crest. A scorching wave of heat swept up the slope, bringing tears to their eyes, and forcing them to retreat behind the ridge. No longer did the men need lights to work by, for the glare of the flames lit up the countryside with an unearthly reddish glow.

Sandy was surprised to see Quiz come staggering breathlessly up to them. He handed Macauley a message. "New plan from headquarters," he gasped.

Macauley frowned as he read it, then crumpled the paper up into a ball. "Darn waste of time, I call it."

"What's up?" Sandy asked.

"Landers wants to give it one more try. We're going to build a line down at the end of the ridge." He walked a little way up the slope and studied the head of the fire driving steadily forward before the wind.

"We've only got a little more than a half-mile leeway. We're gonna have to work fast. Need every man and machine we can spare. C'mon, boys, you're graduating to pick-and-shovel work as of now."

The north end of the ridge terminated in a steep slide of gravel and slag. The proposed fire line was to extend due west from this rockpile for at least half a mile. As Macauley pointed out, everything was against the fire fighters. The terrain was unsuited to efficient operation of the dozers and graders; the timber was old and sturdy; and in places the trees were jammed together so tightly and their foliage so interlaced that trunks on opposite sides of the line appeared to have common crowns.

"With this wind," the gang boss predicted, "our backfires won't accomplish a thing. Most likely, they'll jump the line themselves." He sighed. "But orders is orders."

Because of the time element, the heavy machinery just punched helter-skelter through the woods, and left the cleaning-up to the pick-and-shovel crews. Behind them came the water wagons,

wetting down the brush and trees on the safe side of the line.

Quiz Taylor and Sandy Steele were assigned to a crew of ax men. Jerry James, who had come along about a half hour later, landed a soft job manning a hose. But when the overly plump Quiz collapsed at the side of the trail, Jerry generously offered to swap jobs with him.

"Not permanently, you understand, old boy," he warned Quiz. "Just until you get your wind back."

Within a half hour, Sandy's hands were covered with blisters and his clothes were plastered to his body. Sweat poured down his face, blinding him and caking into mud as it mixed with the dust. His legs felt as if they were made of cast-iron, and he could barely lift one foot after the other.

Enviously, he watched Quiz riding on the back of the water truck. The sight of the fine jet spray gave him a sudden inspiration.

"Hey, Quiz!" he shouted. "Turn that thing on us for a while."

"Good idea, son," one of the smoke-eaters said, and the rest of them picked up the chant. "Let 'er rip, boy."

Quiz obligingly swerved the nozzle in their direction and they were engulfed in cooling mist. Sandy opened his mouth wide and let the water soothe his swollen tongue and parched throat.

After five minutes of this, they went back to work with renewed energy.

The line was completed in record time, but none too soon. The fire front was only about 200 yards away when Macauley gave the order to backfire. Although the front was less than 1200 feet wide, the flame-thrower crews ignited the fringe along the line for a full half mile. The boys, resting with the pick-and-shovel men on the north tip of the ridge, watched anxiously as the backfires flared up strong in the dry brush and foliage. Innumerable times, the flames leaped the line to attack the trees on the far side, but each time the dripping wet boughs repulsed them.

"Looks as if we'll stop her," Sandy said with elation.

One of the fire fighters shook his head gloomily. "The backfire ain't getting anywhere though."

It was true. The backfires were making only slight progress toward the head of the fire, which was racing forward with incredible speed.

"You know what?" Quiz said hesitantly. "I think the wind is beginning to die down."

"Aw, it's your imagination," Jerry said wearily.

"No, he's right," another man exclaimed. "She's slowing down."

Sandy studied the flames closely. He didn't notice any perceptible difference in the rate of the fire, but he did notice that the smoke appeared to

be rising in a more nearly vertical direction. Then, almost miraculously it seemed, the breeze died abruptly.

"My gosh!" Jerry said wonderingly. "It's as if somebody turned off a fan."

Quiz called their attention to the broad band of silver on the eastern horizon. "Look, it's almost daylight. That's the answer. It mostly always calms down at dawn and dusk."

The fire fighters let out a thunderous cheer that was picked up all along the fire line. Macauley came striding up the slope, a big grin on his face.

"Looks like the chief outguessed me," he admitted gleefully. "She's gonna hold."

With the ebbing of the breeze, the backfire and the fire head were creeping toward each other with uniform speed.

"What do we do now, boss?" Jerry asked. "All go home?"

Macauley arched his eyebrows. "You kidding, son? There's still plenty of life in that old devil yet. She could switch off in another direction any time. Once we got this front nailed down solid, we'll attack her from the sides and back. There's still plenty of digging to be done for those who can swing a shovel."

"That definitely lets me out," Quiz groaned. "I don't think I could even pick up a shovel, I'm so beat."

Macauley stroked his chin thoughtfully. "Well, I gotta admit you boys have done more than a man's share of work for one night."

"No," Sandy protested, even though his knees were threatening to buckle. "I'll stick it out with you fellows."

"Me too," Jerry said valiantly.

Macauley smiled. "You boys are all right. But you need to rest. We all do, for that matter. Suppose you make tracks back to headquarters and tell the chief to get another crew in here to relieve us."

"Well, if you're sure," Sandy said, with undisguised relief. "I guess we should report back to Dick Fellows, anyway."

"He was down here himself just a while back," one of the men volunteered. "Looking for you boys, I think."

"Come on, let's go find him," Sandy said.

By the time they got back to the command post at the other end of the ridge, it was broad daylight. Dick Fellows was directing a crew fighting a small brushfire at the edge of the clearing. Beyond them the woods was a charred, smoldering carpet. The tree trunks were blackened and burned for about ten feet up their trunks; but the fire had not crowned.

"Heard you were looking for us," Sandy announced. "We were fighting a fire."

The ranger grinned. "So I heard. How do things look up there? Does Macauley think she'll hold?"

"He's got his fingers crossed. He wants to know when his men are going to get some relief."

Dick wiped his soot-streaked face with his sleeve. "Just as soon as we can. Landers put a call out for more volunteers when she took off like that last night. He had a crew all lined up, but then a report came in that there was a spot fire up north about three miles, so he sent the whole bunch of them to swarm over that one before it really gets started. It's been a rough night." He looked around at the men beating out the brush-fires around the clearing. "I tell you what, though. I have about a dozen smoke-eaters mopping up here and along the south line. Soon as things look safe, I'll send them down to replace a dozen of the boys down there."

"Those men need relief bad," Quiz declared. "They're so bushed that they won't be able to work efficiently for much longer."

"I know," Dick agreed. "You boys look pretty bushed yourselves. Why don't you take one of the jeeps and drive back to headquarters? After a good meal and a few hours' sleep, you'll feel a lot better." Ominously, he added, "We may need you again."

"Why is everyone so skeptical?" Sandy de-

manded. "Don't you believe that line will hold now?"

The ranger's face was grim. "There's nothing on this earth as unpredictable as a forest fire. I won't believe she's really out until I personally squash the last ember under my boot."

Quiz stared off into the ravaged grove at the other side of the clearing. "Those trees, will they die?" he asked the ranger.

"A tree is like a human being," Dick explained. "It can survive some pretty bad burns, although it may be scarred badly. Underneath the bark there's a thin layer of living matter called the cambium, which can be compared with the underskin on a human being—the dermis. If the fire burns through the outer bark all around the trunk and kills the cambium, the tree dies. Fortunately, the bark usually burns through only on the side of the tree facing the advancing flames. It depends on the age of the tree and the thickness of the bark. I think most of those old fellows along the fringe of the fire will pull through. Not much chance for any others." He sighed. "Well, I guess Sandy and Jerry aren't interested in hearing a botany lecture right now."

Quiz smiled wanly. "Even *I'm* not interested in botany right now. Let's go eat, fellows."

CHAPTER ELEVEN

Last-Ditch Stand

WHEN THEY REACHED the main road, Sandy pulled the jeep up in front of fire headquarters. Prince came bounding out to meet them, leaping up on Sandy and barking happily. Then Russ Steele appeared in the entrance. His face was lined with weariness and worry.

"Well, hello there," he said. "Back from the wars?"

"We've just about had it," Jerry said. "So have the other fellows on the line."

Russ threw one arm across his nephew's shoulder. "I understand you boys are real hot-shot smoke-eaters."

Sandy grinned. "We don't feel like hot shots at the moment."

"Tired, eh?"

"And hungry!" Jerry and Quiz added simultaneously.

Russ laughed. "I don't doubt it. I was just on my way to chow. Come along."

They walked slowly in the direction of the mess tent, with Prince trotting at their heels. "What kind of a night did you have, Uncle Russ?" Sandy inquired.

"Spent most of it on the phone and radio. I'm hoarse. Not as rough as you had it, however."

"How's Mr. Landers?" Quiz asked.

"Great! He thrives on this kind of excitement. What a dynamo that man is. He can talk on six different phones at once, and play checkers at the same time. And what he doesn't know about forest fires wouldn't fill up the eye of a needle."

"He sure fooled Macauley," Sandy said. "He was certain that last line at the end of the ridge wouldn't stop the fire."

Russ frowned. "Well, the chief wasn't sure it would, either. He just had a hunch that that wind would blow itself out come daylight. He's still not convinced that they've stopped her for good."

"Gee," Sandy said moodily. "Even the fire boss. This must be a nerve-racking way to earn a living."

"They don't get any money for fighting fires. Not these boys anyway. There are exceptions, of course. Gigantic fires where they can't raise enough men by the volunteer system. Then they have to hire them."

At the mess table, their tin plates were heaped with scrambled eggs, bacon and buttered toast. It was obvious from their dirty, disheveled ap-

pearance that they had just come off the fire line, and the cooks besieged them with questions. The boys talked freely—and not without pride, Sandy had to admit to himself. It was a good feeling being treated as equals by these hard-bitten old smoke-eaters.

When they were seated cross-legged under a shady tree, wolfing the food and washing it down with gulps of hot coffee, Sandy changed the subject.

"Any news on that bomb?" he asked his uncle in a low voice.

Russ shook his head somberly and swallowed a mouthful of egg. "Nothing. I was in touch with the Pentagon last night, and again this morning. As you can imagine, they're pretty concerned about this fire. They offered to send in troops to help out if it becomes necessary."

"Do they think there's any danger?" Quiz asked. "Of the bomb exploding, I mean."

Russ put down his plate and massaged the thick stubble on his chin. Then he took a pack of cigarettes from his pocket and lit one. It startled Sandy, for he knew that his uncle never smoked cigarettes, except when he was under extreme tension.

"They don't *think* so," he replied, emphasizing the verb. "But there are so many things we still don't know about atomic energy. And of course,

there's always the chance the casing was damaged in some unpredictable way so that—oh, it's only a billion-in-one chance."

Jerry suddenly lost his appetite. "That's just what they said in the papers that time a comet landed right in some lady's bed."

"Not a comet, you dope," Quiz said disgustedly. "It must have been a meteorite."

Jerry glowered at him. "So what? It happened."

Russ offered Prince the rest of the food in his plate and the dog gobbled it up eagerly. "Well, speculation won't get us anywhere. The important thing is to get that fire under control first."

Quiz stretched out flat on his back in the dry, soft grass. "The most important thing to me is sleep. I wouldn't care if an A-bomb went off right under my nose."

Jerry snorted. "I kept expecting that to happen all night."

Russ smiled. "I tell you what. There's a small brook down the hill a ways. Why don't you go down there and wash up? Then stretch out on the pine needles and take a snooze."

"Good idea," Sandy agreed. He looked at his watch. "It's eight o'clock now. Wake us up at two —that will give us six hours' sleep. Unless you need us for anything, of course."

"I'm sure the worst is over," his uncle assured him. "I think I'll grab some rest myself after I

discuss a few things with the chief." He pushed himself to his feet and waved to them. "See you later."

Prince trotted off faithfully behind him.

The boys came upon the stream in a shallow gully about a hundred yards behind the camp. Like all of the streams they had seen in the drought-racked forest, it had shrunk to a mere inch of water gurgling over a pebbly bed. But by scooping out a basin where the flow was heaviest, they were able to take a sponge bath. Clean and refreshed, they stretched out under the small pines along the bank and fell asleep at once.

"Wake up!" The urgent cry penetrated Sandy's consciousness as a rough hand shook him out of a deep slumber. He opened his eyes and stared up into the harried face of his uncle.

"The fire," Russ Steele said tersely. "It's broken out again. You'll probably be needed. Come up to headquarters right away." With that, he turned abruptly and trotted up the slope.

His mind still foggy from sleep, Sandy woke Jerry and Quiz. And for several minutes the three boys stared blankly at each other.

"How did it happen?" Jerry mumbled.

Sandy was vaguely aware of the wind whistling through the pines. "Sounds like it's blowing up again—I guess that's it. Well, let's get going."

"What time is it?" Quiz asked.

Sandy looked at his watch. "A little after one o'clock."

Dragging their feet like zombies, they walked up the hill to the big tent. Paul Landers and Russ Steele were bent over the map with three other men whom Sandy had not seen before.

Russ Steele looked up as the boys entered the tent. He indicated the three strangers. "Fellows, I'd like you to meet Paul Ames, Bill Lukas and Tom Fenning. They've come down from Canada to help us fight this fire. And brought their own crews with them."

"Just in time, too," Landers said gratefully. "If only I had been able to send in a fresh crew this morning, we might have been able to avert this new flare-up. Those poor devils had been working for seventeen hours without letup; they just didn't have anything left."

Sandy leaned over the map. "How did it happen?"

Russ ran his finger along a red line running out from the north end of the ridge. "It jumped the emergency line you boys helped to build last night. Shortly after noon that southwest wind picked up again and there wasn't any stopping her this time. It happened so fast, a half dozen of the men were severely burned."

Sandy could see that the fire was already ad-

vancing on a narrow front past the end of the ridge.

"The fact is, it's really a brand-new fire," one of the Canadians said.

"Exactly," Fire Boss Landers agreed. He drew a circle around the burned-out area southwest of the ridge. "We've got it licked in this sector."

The Canadian studied the map with intense concentration. "As I understand it, this region north of the ridge is rocky and not too heavily forested." He touched his index finger to a small oval representing a hill. "Any vegetation growing on this hill?"

Landers shook his head. "Scrub and grass. The same as on the ridge."

"Then I don't see any reason why we can't stop her there." He took a pencil and drew a short line connecting the hill with the end of the ridge. "We'll build one line here. And another on the opposite side." He traced a second line running east of the hill.

"You can try," Landers said without much enthusiasm. "And if it fails, we'll just have to fall back and let her burn herself out between the two big firebreaks." He indicated the intersecting roads.

The Canadian looked up at his two partners. "Let's not waste any more time."

Russ put a hand on Sandy's shoulder. "I thought

you boys could ride down there with them and help out however you can."

"Sure thing," Sandy said, and the other two boys nodded in agreement.

Bill Lukas, the tall, blond Canadian who seemed to be in charge, flashed his white teeth in a broad smile. "Glad to have you aboard, gentlemen. We're on our way."

The Canadians climbed into the front seat of a small, squat truck parked outside the tent, while the boys boosted themselves up on the rear end and let their legs dangle over the tail gate. As they started off, Sandy saw his uncle standing in the entrance with Prince; Russ bent over, spoke to the dog and gave him a pat on the back. Like a shot, Prince took off after them. He caught up with the slow-moving vehicle easily, and with a graceful leap landed between Sandy and Quiz.

"He'll see that you stay out of trouble!" Russ yelled to them.

Tom Fenning turned around in the front seat and grinned. "Hello, what's this? More reinforcements? He doesn't look much like a firedog to me."

"He's a Doberman pinscher," Sandy said.

Jerry snickered. "He's also a confirmed coward." The dog cocked his head to one side and regarded Jerry with plaintive eyes.

"See, you hurt his feelings," Quiz said.

Jerry patted Prince's head. "That's all right, feller. So am I."

"That's not what we hear," Fenning told him. "Mr. Landers says you boys were right in the thick of it all night. It was pretty rough, I guess."

"It sure was," Sandy admitted. "And discouraging. When we came back this morning, we thought it was all over but the shouting."

The three Canadians nodded sympathetically. "That's fire for you," Lukas said.

Quiz asked the men what had brought them all the way down from Canada.

"Good neighbor policy," Fenning said. "Your boys have helped us out on some tough fires."

At the cutoff that led to the fire sector, three trucks loaded with men and equipment were parked by the side of the road.

Lukas waved to them as he drove past. "We're off, boys. Follow us."

By the time they reached the north end of the ridge, the bulldozers had already started to clear a fire line to the hill about a third of a mile away.

Dick Fellows and Ed Macauley came forward listlessly to greet them; the ranger and the gang boss were too exhausted even to show their gratitude that relief had finally arrived.

The ranger pointed to the walkie-talkie sitting on the ground. "Landers radioed the new battle plan to us. We've got it under way."

"Fine," Lukas said. "We'll take over from here. Your men must be ready to drop in their tracks."

Macauley sighed. "They're working strictly on nerve."

Lukas accompanied the ranger up to the top of the ridge, while the other two Canadians mobilized their crews to go into action. From this vantage point, it was possible to trace the course of the fire since its beginning. With the heavy screen of foliage destroyed, the boundaries of the burned-out area were clearly defined. There was a long narrow strip parallel to the ridge, swelling out into a sector of more than 300 acres to the southwest. Only a feeble surface fire was burning around the fringes of this area now; the stiff gale was turning the flames back on ground that had already been burned over.

Sandy's first impression was that this latest peril had been exaggerated. Compared to the awe-inspiring spectacle of the previous night, the fire as it appeared now, in broad daylight, didn't seem very threatening. After it had jumped the line at the end of the ridge, it had taken an unusual shape and direction. It had been slowed down in the center by the thinning timber and brush on the approaches to the hill beyond the ridge. As a result, the fire front had flattened out and then assumed a crescent shape as the flames went racing through the heavier growth that flanked the hill

on both sides. Sandy estimated that the area it was burning over was less than fifty acres. When he pointed this out to Dick Fellows, the ranger shook his head.

"The way she's crowning, we'd have trouble confining her on ten acres." He turned to Lukas. "You're not going to have time to be too particular with those lines. She's moving in too fast."

Lukas agreed. "We'll have to get our backfires started as soon as possible, and just pray that the tank trucks can put out enough water to keep *them* from jumping back at us. That infernal wind! Why doesn't it let up!"

Quiz called their attention to a great dark mass building up low on the western horizon. "Aren't those nimbus clouds?" he asked.

The ranger studied them uncertainly. "They look like it all right. But don't count on their doing us any good. I've spotted nimbus formations a dozen times this month, but they always drifted off somewhere else."

"What gives with this nimbus business?" Jerry demanded.

"Rain clouds," Quiz translated. "And they do seem to be coming in this direction."

Lukas winked at the ranger. "The whole forest could burn down while we're waiting for rain. I better get to work." He waved and started down the slope toward the fire line.

"What can we do, Dick?" Sandy asked the ranger. "We had about five hours' sleep, so we're ready for action."

"Sleep," Dick muttered, almost reverently. "I've forgotten what the word means." His eyes were sunken and bloodshot with enormous circles around them.

"Why couldn't I take over for you for a while on the walkie-talkie?" Sandy asked. "Even if you only grab a half-hour nap it would help."

"It sure would." The idea seemed to appeal to him. "I could stretch out here on the ground, and if anything important comes up you could wake me. . . . The radio is a cinch to operate. All you have to do is keep headquarters up to date on what's happening at our end."

"You want us to scout again?" Jerry asked.

"Yes. You take the line on one side of the hill; Quiz can scout the line on the other side. Check back with Sandy every quarter of an hour or so in case any new instructions come in from the chief."

"What I can't understand," Sandy said, examining the walkie-talkie radio, "is why you don't have a whole flock of these things all along the fire line. If every gang boss had one, you'd know exactly what was going on in every sector."

The ranger yawned. "Tell it to the taxpayers, my boy. It's always the things that are most important to their own safety and welfare that they gripe most about paying for. . . . Well, I'm go-

ing to rest my tired bones." He stretched out on the hard, rocky ground and fell asleep immediately.

"Come on, Quiz," Jerry said. "Let's get on the ball. I'll give you a break and take the line across the hill, so you won't have to walk so far."

Quiz snorted. "Big deal! Then I'm the guy who has to climb this hill every fifteen minutes to check in. Unh-uh! I'll flip you for it."

"Okay," Jerry conceded grudgingly. "Sandy, you flip the coin."

Sandy grinned as he took a quarter from his pocket and spun it high in the air. "You call, Quiz."

"Heads!" Quiz snapped.

Sandy caught the coin deftly in one hand and slapped it down on the back of his other hand. Slowly he uncovered it as Quiz and Jerry bent over to look.

"It's tails," he announced blandly.

"I win!" Jerry exclaimed. "So I pick the far side of the hill. Don't take it so hard, pal. A little climbing will help to reduce that spare tire of yours."

Quiz shook his head solemnly as he and Jerry started down the ridge. "Just my luck. I always call them wrong."

As it turned out, it was one of the unluckiest calls Quiz had ever made in his life.

CHAPTER TWELVE

Trapped on the Hill

SEVERAL TIMES during the next hour, Sandy heard the deep rumble of thunder, and a few minutes after three o'clock, the sun was blotted out by a low overcast. But the velocity of the wind had been steadily increasing, and the fire was raging more fiercely than ever. The backfires had been completely ineffective, and at three-fifteen, Jerry came puffing up the hill with the bad news.

"She's breached the line. Lukas says there's no holding her now. They're going to evacuate."

For some time, a sweeping curtain of smoke had obscured Sandy's view of the fire front. And the reports he had received over the walkie-talkie from headquarters indicated that aerial observation was no better.

"I'd better wake up Dick," he said. He went over to the ranger, who was still in a deep sleep, and shook him violently.

Dick Fellows raised himself laboriously on his elbows and listened glassy-eyed as Sandy told him

the latest development. "I knew it! I knew it!" he mumbled. "All of it for nothing. In the end she was bound to beat us." He struggled to his knees. "I'll notify headquarters. You boys take one last scout down the line. Make certain all the men get out safely."

At the bottom of the slope, Sandy turned and whistled to Prince, who was sniffing curiously at a half-eaten sandwich in the grass. "Better come with us, boy, so you don't get left behind."

With a yelp, the dog trotted after them.

A solid wall of fire blocked the first 600 feet of the trail that ran to the hill, and they had to detour more than a hundred yards into the woods. Machines and men crashed by them on all sides, hurrying in the opposite direction. As they neared the hill, they ran into Lukas.

"Where are you boys going?" he asked breathlessly.

"We're supposed to make sure that everybody gets out safely," Sandy told him.

"You're wasting your time," the Canadian said. "All my men are accounted for. We've lost her for good this time. She's crowned and running fast on both flanks."

"We'd better check anyway," Sandy insisted.

"Don't get caught on that hill," Lukas warned them. "In another twenty minutes, the flanks will close and she'll be cut off."

"We'll be careful," Sandy promised. "Come on, Jerry."

They ran on for another quarter of a mile without encountering anyone else. As they came abreast of the hill, Sandy stopped. Ahead of them was an impenetrable curtain of smoke, and beyond it they could hear the unmistakable crackle of flames.

"We'd better turn back," Sandy said grimly. "If anyone is up there, they're finished anyway."

Jerry did an about-face without breaking step. "All you rabbits get out of the way and make room for somebody who can really run," he bellowed.

"Wait a minute!" Sandy said. "Where's that darn dog?"

"He's probably back at headquarters hiding under a tent flap," Jerry replied cynically. "The big coward. Come on, let's go!" He reached out and grabbed Sandy's arm.

The blond boy shook him off. "No, Jerry! He was here a minute ago."

Cupping his hands to his mouth, he began to shout: "Prince! Prin-n-ce! Here, boy!" He put two fingers between his teeth and whistled shrilly.

There was a long silence. Then, from a distance, they heard the sharp, urgent barking of a dog.

Jerry groaned. "Good night! What's he up to now?"

Sandy was perplexed. "Sounds like he's over by the hill. But why?" Once more, he formed a

megaphone with his hands and called to the dog. *"Prince! Come on, boy!"*

This time he was answered by a mournful howl.

Jerry's voice was trembling. "Sandy, we've got to get out of here. You heard what Lukas said."

The heat and smoke were stifling now, and the roar of the fire seemed to surround them.

Still Sandy hesitated. "Suppose Prince is hurt, Jerry?"

"He was here just a minute ago!" Jerry's voice was frantic. "How could he get hurt?"

"Maybe he stepped into a trap."

The other boy slapped one hand against the side of his head in exasperation. "Oh, brother! Look, I'm leaving, pal." He turned and ran about ten paces, then looked back across his shoulder. "Aren't you coming, Sandy?"

"You go on," Sandy said stubbornly. "I'm going over to the hill and see what's happened to Prince."

"Sandy! Come back!" Jerry pleaded in desperation, as his friend disappeared into the thick brush. He hesitated for just an instant, then ran after him. "Hey, you dope! Wait for me!" he shouted.

Sandy had covered about 200 yards when he stumbled into ankle-deep water. He vaguely recalled one of the fire fighters mentioning that a stream ran around the east side of the hill. He continued on until he felt the ground rise sharply

beneath his feet. Then he stopped and called out to the dog.

"Prince! Where are you, boy?"

Ahead of him, to the left, he heard loud barking. He followed the sound and broke out of the trees onto the abandoned fire line. Glancing to the left and right along the ten-foot strip, he saw a solid wall of fire on both sides where the flames had jumped the line. Roughly 1200 feet separated the twin fronts, but as the flames raced through the trees behind the hill, the gap was closing fast.

Sandy started as Prince's head burst out of a thicket across the path from him. "There you are!" he said with relief. "What are you doing way over here? Come on, we've got to get out of the woods fast."

Prince barked and backed into the thicket again.

"You stupid dog! *Come here!*" Sandy yelled. In a frenzy of anger, he dropped down on his hands and knees and charged into the thicket after the dog. He had gone about five feet when he came upon Prince standing over the still form of Quiz Taylor sprawled out on the ground. From the fire line he had been completely hidden by the thick foliage.

Sandy had a moment of overwhelming panic and confusion. Behind him, he heard Jerry calling

to him. "Over here, Jerry," he shouted as he stood up in the waist-deep brush.

Jerry stared at him incredulously from the center of the path. "What are you doing?"

"It's Quiz," Sandy said weakly. "He's unconscious. Give me a hand. We've got to carry him out."

Jerry turned pale. "Good night!" He struggled through the bushes to Sandy's side and stared bug-eyed at Quiz. "Is he alive? What happened to him?"

"I think he's alive. But I don't know what happened to him. If it hadn't been for Prince—" He didn't finish the statement, but Jerry knew what he meant.

The boys managed to get Quiz on his feet, and by slinging one of his arms around each of their necks, they were able to drag him along between them. Their progress was painfully slow. Every few feet, vines, bushes and other impediments would snag on Quiz's feet. And both Jerry and Sandy were physically exhausted from the night before. They had only gone as far as the stream when it became obvious to Sandy that the dead weight of the stout boy was too much for them.

"We'll never make it, Jerry," he gasped. "The fire will get us for sure."

Jerry was on the verge of panic. "What'll we do? We can't leave him here."

Sandy looked around frantically. "We've only got one chance. The hill. Maybe we can signal to the helicopter from the top."

Jerry shook his head in despair. "They'll never spot us through all this smoke."

"Just the same," Sandy insisted. "It's our only chance. I heard one of the rangers say that forest fires often leave one side of a hill untouched." Abruptly, his eyes fell on Prince, who was standing in the shallow water, whimpering and trembling. "Say, I've got an idea!" He rummaged in his pockets until he found the stub of a pencil. "You got anything I can write on, Jerry?"

"Here's a piece of paper that's blank on one side." Jerry handed him a folded sheet on which Dick Fellows had scribbled a message the night before.

Sandy crouched down, and spreading the paper flat on his leg, he began printing in big block letters:

TRAPPED ON HILL. SEND HELP. SANDY

When he had finished the message, he sat down and began to unlace one boot.

"What the heck are you doing?" Jerry asked.

"I need the lace to fasten this note to Prince's collar. The way he travels, he can make it out of here easily. If the note gets to Uncle Russ—or anybody for that matter—maybe they can notify

the 'copter pilot that we're on the hill. You've seen how they perform air rescues in the movies, haven't you?"

Jerry's voice wasn't too hopeful. "Sure. They drop rope ladders or slings. But by the time they get this note—if they *ever* do—we'll be fried to a crisp."

It took all of Sandy's will power to force a feeble grin. "We'll come out of this, pal. The most important thing to remember when you're in a tight spot, Uncle Russ says, is to stay calm and cool; if you use your head there's mostly always a way out."

"Save your breath, Sandy. I'm so scared I could blubber."

Sandy folded the paper several times until it was a tight little wad. Then he called the dog over to him. Wedging the paper into the leash ring on Prince's leather collar, he bound it securely in place with the long thong from his boot. He took the Doberman's slender muzzle between his two hands and looked straight into the intelligent brown eyes.

"Prince," he said slowly, emphasizing each word. "Go . . . to . . . Uncle Russ . . . Uncle Russ . . . Understand? . . . Find Uncle Russ . . . That's the boy." He turned Prince around in the opposite direction and gave him a pat on the rump. "Go, boy!"

With a parting yelp, Prince streaked out of sight into the forest.

The crackle of the fire was louder now, and they could see it advancing through the treetops on both sides of them. The sky was completely blotted out by smoke, creating an artificial dusk.

"We'd better get back to the hill," Sandy said.

"What do you say we soak ourselves in the stream?" Jerry suggested. "I heard somewhere that you can protect yourself from the heat and flying embers that way."

"Good idea," Sandy agreed. "Maybe the cold water will revive Quiz too."

The two boys stretched out full length in the sluggish stream, turning over and over until their clothing was soaked back and front. Last of all, they pulled Quiz into the stream, splashing water on his face and head.

For the first time since they had found him, he showed signs of life—a soft moan and a fluttering of his eyelids.

"He's got a lump the size of an egg on his head," Sandy pointed out. He scooped up a handful of wet mud from the bed of the stream and plastered it on the swelling.

"Look, he's coming to," Jerry said.

Gradually, the injured boy's eyes opened; they stared blankly into space for a few moments, then focused on the anxious faces hovering over him.

"Sandy . . . Jerry . . ." he said weakly. "Was I asleep?"

"You were out cold," Sandy told him. He touched the lump on Quiz's head gingerly. "Something must have conked you."

Recollection flooded back to Quiz. "I climbed a tree to see if I could get a better look at the fire. A branch broke and that's about all I remember."

"Do you feel strong enough to walk?" Sandy asked him.

"I think so." Suddenly his hands went to his eyes. "My glasses! Where are they? I can't see two feet ahead of me without my glasses."

Sandy winced. "I picked them up, Quiz. But I don't think they're going to do you much good." He reached into his shirt pocket and took out a pair of woeful-looking eyeglasses. The frames were twisted like a pretzel and the lenses were spider-webbed with tiny shatters.

Quiz accepted them glumly. By twisting and bending the pliable frames, he was finally able to wear them, though they perched on his nose at a rakish angle. In spite of their predicament, Sandy and Jerry had to laugh.

"You look like a cockeyed owl," Jerry said.

"Nobody asked you," Quiz growled. He squinted through the shattered lenses. "It's like looking through cheesecloth. But it's better than nothing."

A blast of scorching air hit Sandy on the side of his face. Because of the smoke and the thickness of this portion of the woods, it was impossible to tell exactly how far away the fire was, but he knew it couldn't be too far.

"Come on, boys, we've got to get back to the hill."

Quiz's mind was still a bit hazy. "Hill?" he demanded. "You mean the ridge?"

Briefly Sandy described how the fire had outflanked them.

"We're cut off," Jerry said with a note of doom in his voice. "Surrounded by fire."

Quiz swallowed hard. "There must be *something* we can do." He snapped his fingers as a thought hit him. "Wait a minute! Macauley's men left a pile of shovels, hoes and picks behind when they were relieved by the Canadians. We can clear a line in the grass on this side of the hill and start a backfire."

"What are we waiting for?" Sandy said. He led the way out of the forest, which ended about ten yards beyond the abandoned fire line. Directly ahead, the hill rose up like an oversized haystack.

Quiz pointed to a stack of digging implements off to one side. "There's the stuff I was telling you about. But first let's go up to the top and have a look around." He started up the steep, grassy slope that ran up about 200 feet to the summit.

The top of the hill was littered with rocks of all sizes and shapes. The boys scrambled up on an enormous boulder, where they had a bird's-eye view of the surrounding countryside. Up here, the force of the wind was so great that they had to crouch on hands and knees to keep from being toppled over. On the west slope, a slow but determined grass fire was burning all around the base of the hill. But they had never seen anything to match the fury of the crown fire raging all around them. A quarter of a mile behind the hill, the twin fronts had finally united, sealing off the last corridor of escape. They were now literally isolated on an island in the midst of a sea of flame. A shifting current of air sent a hail of hot coals and blazing twigs raining down on the hill.

"Ouch!" Jerry beat out a spark that was sizzling on the wet material of his pants.

Smoke spiraled up from several spots on the grassy slope away from the fire.

"Come on!" Sandy yelled, leaping off the boulder. "We've got to beat those out before they really get started." He ran down the slope to the nearest place where the grass was smoldering and stomped on the sparks with his boots.

Jerry went to another danger spot farther down the slope, while Quiz spotted one in a patch of heavy brush far to the left. As Quiz leaped feet-first into the bushes, Sandy, who was looking in

that direction, was startled to see his friend unexpectedly disappear as if the earth had swallowed him. He heard the rattle of falling earth and stones, followed by a cry of pain.

"Quiz!" he shouted in alarm, and started over in that direction.

CHAPTER THIRTEEN

An Unexpected Find

WITH RELIEF, he heard Quiz's voice. "Watch your step! There's a big hole over here."

Sandy advanced cautiously to the rim of a crater hidden in the high brush. "Good night!" he said anxiously, as Quiz's head poked into view. "This is your unlucky day. Did you hurt yourself?"

"I think I sprained my ankle." The other boy held up his hand. "Give me a lift, will you?"

Jerry came up and the two of them dragged poor Quiz out of the hole.

"Now, how do you suppose that got here?" Sandy said.

Quiz shrugged. "Looks like a meteorite crater. Anyway, it really wasn't such bad luck my falling into it. It's the perfect place for us to wait out the fire."

"How do you mean?" Jerry demanded.

"We build our fire line right around the circumference. Clear a strip about two feet wide out

from the edge and start a backfire. It's deep enough so that even if the whole hill goes up, we'll be protected from the heat."

"That's a great idea, Quiz!" Sandy exclaimed, pounding him on the back. "You wait here while Jerry and I go down and bring up some of those shovels and stuff."

Leaving Quiz to nurse his injured ankle, the other two boys hot-footed it down the slope to the mound of equipment the fire fighters had left behind. Sandy gathered up a shovel and two picks. "Grab a couple of those Pulaski hoes," he told Jerry. Tears streamed out of his eyes from the smoke, and Jerry was seized with a coughing spell that almost choked him. The heat was unbearable as the fire closed in on the hill.

Staggering up the slope again with their load, they dumped the tools at the edge of the crater. For a few minutes, they were too breathless to work.

"I've never been so pooped in my life," Jerry gasped. "Even after four quarters of football."

"Lack of oxygen," Quiz theorized. "The fire steals it out of the air."

Sandy remembered a dreadful story he had heard about a dozen men who had taken shelter in a cave in the midst of a forest fire. The fire hadn't touched them, but they had all died never-

theless. The fire had exhausted all the oxygen in the cave in the same way that a candle will when it burns under a glass bell in a laboratory experiment. He was glad that this was an open pit high on the side of a hill.

"We had better get started," he said. "Quiz has a bad leg, Jerry, so you and I will do the heavy work. Quiz do you think you can follow us up with a hoe?"

"Sure thing," Quiz said promptly. "I think the old ankle will hold up."

They worked in a frenzy, fear and desperation lending them strength and endurance that Sandy had never realized they had. Only minutes before, he had felt he was too weary to lift an ax, much less swing one in such tireless fashion. In less than twenty minutes, they had cleared a broad ribbon around the rim of the crater.

The hill was ringed in flames now. Below them the fire swept through the grass from the wood line and started up the slope. The sparse growth on the crest was ablaze, and on either side a dozen little spot fires, ignited by flying embers, spread and merged.

Sandy jumped down into the loose sand and gravel of the crater. "C'mon, you guys! Let's shovel this stuff up all around the edges to form a barricade."

Grabbing a shovel, he plunged it into the sand. There was a dull *clank* of metal jarring against metal, about two inches below the surface.

"Wow!" he exclaimed, feeling the impact vibrate through the handle into his hands. "What did I hit?"

"Maybe a chest of pirate gold," Jerry suggested, leaping into the hole after Sandy.

"Bright boy," Quiz said sarcastically. "Maybe Captain Kidd sailed all the way to Red Lake to bury his booty."

Sandy and Jerry dropped to their knees and began scooping the loose earth away from the spot with their hands. Quickly they uncovered the edge of what seemed to be a flat sheet of metal. They continued digging until they had uncovered enough of the object for Sandy to get a grip on it. He pulled and tugged, but it was immovable.

"This is only a small piece of whatever it is," he said finally. "It's buried pretty deep."

Quiz, who had come up behind them, was studying the exposed metal with keen interest. "Dig some more," he told them.

As the boys pawed away at the earth like dogs, the strange object began to assume form—a vaguely familiar form, Sandy thought. It was coated with a heavy, dull green paint.

"Oh, good night!" Quiz whispered suddenly. "You know what that looks like?"

At that instant the same idea must have struck both Sandy and Jerry, for they stopped digging and looked up with stricken expressions.

"It looks like a fin—a fin on the tail of a bomb!" Sandy said tremulously.

"It couldn't be!" Jerry's voice cracked. "Or could it?"

Quiz adjusted his smashed glasses and peered more closely at the mysterious object. "It could be and it *is!* That's a fin all right. I saw a newsreel once showing a demolition squad removing a dud bomb from a meadow in England; it had been there ever since World War Two. And it was lying half-buried in a crater just like this one."

Jerry began to back away as if he were confronting a poisonous snake. "Imagine sitting on an A-bomb, fellows! We gotta do something!"

Sandy looked around grimly at the flames converging on them. "Right now we're in a lot more danger from that fire than we are from any bomb. Come on, Jerry, let's get busy with the shovels. Quiz, you start lighting the backfires. I picked up a signal flare down below along with these tools. It's over by the hoes. You should be able to ignite this dry grass easily with that."

With the backfires blazing strongly around the parapet of earth that Sandy and Jerry had erected along the rim of the pit, the boys arranged themselves in a prone position in the center of the pit.

Its sides shielded them from the direct blast of the flames, and the earth they were lying on was cool and comforting. As an added precaution against flying embers, they covered themselves from foot to neck with sand.

"Now I know how a mole feels," Sandy said.

"I wish I were a mole," Jerry answered. "I wouldn't stop burrowing until I reached China."

Quiz heaved a handful of sand at a burning brand that had dropped a few feet away. "I don't know what you're so worried about. We're as snug and safe here as three bugs in a rug."

"Four bugs in a rug," Jerry amended gravely. "You forgot the bomb. For all we know that baby might be all set to blow this very minute."

"Don't be silly," Quiz scoffed.

"It's not so silly," Jerry defended his position. "You heard what General Steele said. Anything is possible. Even he couldn't predict what might happen."

"Gee, I wonder what Uncle Russ is doing right now. He's probably wondering how he's going to break the news to our folks," Sandy said.

"You think Prince got to him with that note?" Jerry wanted to know.

Sandy shrugged. "Even if he did, Uncle Russ must think we're fried to a crisp by now."

Quiz gazed affectionately at the exposed tip of the bomb's fin. "We might have been too, if it

hadn't been for this lovely hole. We never could have dug it ourselves."

Sandy raised his head and sniffed. "I wonder how the fire is coming? Doesn't it sound as if it's letting up a little?"

"The smoke's not so thick," Quiz admitted. "Want to take a look?"

"I'll go." Sandy sat up, dumping the dirt off himself. "You fellows stay in your cocoons." Slowly he got to his feet and looked around.

On all sides of the crater, the ground was black and smoking and littered with glowing embers. But only in a few places were there still tongues of flame licking up. The hill had been burned clean, but the danger was over. Sandy felt his knees go wobbly with relief. The forest was still blazing fiercely all around them, but they were safe now.

"I think we've made it, fellows," he said. "All we've got to do now is wait for somebody to come and rescue us."

For the next half hour, the boys watched the fire spreading through the forest to the east. Several times Sandy ventured out of the pit, but the burned ground seared his feet even through his thick-soled boots.

"How long do you think it'll be before they find us?" Jerry asked impatiently.

"I have no idea." A new thought struck Sandy.

"You know, maybe they don't even know we're missing. There must be so much confusion back at headquarters, that Uncle Russ probably hasn't had time to give us a thought. He may think we're somewhere along the road working with one of the crews."

"Do you think they'll be able to stop her at the road?" Jerry said.

"Oh, they'll bottle her up between the two big firebreaks," Quiz said. "But it's still going to be a major catastrophe. All that beautiful timber going up in smoke—enough wood to build an entire city, Macauley says."

"Well, just so *we* didn't go up in smoke," Jerry said. "Along with our friend back there. . . . Doesn't it give you the cold shivers to think that you're sitting on top of an atomic bomb?"

"Not in the least," Quiz denied. "As a matter of fact, I'd like to dig the thing out and see what it looks like. We can't tell anything about it from that little tip of the fin."

Jerry stared at Quiz as if he were crazy. "You'll dig alone, friend. And wait until I'm at least a thousand miles away."

Quiz shook his head despairingly. "Jerry, where's your scientific curiosity?"

"You know what curiosity did?" Jerry said.

Sandy motioned for them to be quiet. "Listen; hear anything?"

The throb of engines came to them through the smoky overcast.

"Sounds like a chopper," Jerry said.

Soon it was directly overhead and building up in volume. Unexpectedly a big helicopter broke out of the smoke less than fifty feet above them. The boys leaped up and down, waving their arms and shouting. Even Quiz hopped about on his one good leg. The figures in the glass-enclosed cockpit were clearly visible.

"There's Uncle Russ!" Sandy yelled.

The great rotor blades churned the air like the wings of a giant bird as the ship braked its descent about twenty-five feet above the pit and hung motionless in air.

"They're not going to land, are they?" Jerry looked concerned. "It will squat right on top of us."

In answer to his question, a hatch in the underside of the plane slid open and a Jacob's ladder was let down slowly. A man's voice blasted out of the 'copter's special loud-speaker system:

"This is Russ Steele. . . . Are you all okay? . . . Just nod your heads, I can't hear you." The boys nodded vigorously. "Good! Think you can all make it up the ladder? . . . Still too hot down there to try a landing." Sandy and Jerry nodded, then pointed to Quiz's ankle with elaborate gestures. "Quiz can't make the climb? . . . Well,

Quiz, do you think you can hold on while we reel you in?" Quiz nodded his head affirmatively. "Fine. Sandy and Jerry, you two come on up first."

The ladder was dangling right before their noses now. Sandy took a long breath and put his left foot on the first wooden rung, grasping the rope sides firmly. "Here I go," he said.

And go he did! Without warning, a gust of wind caught the 'copter and lifted it ten feet in the air. Sandy, clinging for his life to the ladder, went sailing up and out in a wide arc. Back and forth he swung like an acrobat on a high trapeze. Below him the ground swirled sickeningly and he squeezed his eyes tight shut. Uncle Russ's voice rang in his ears.

"Hold tight! You'll be all right."

He swung and spun in diminishing circles until finally the ladder was still. Then he began to climb as fast as he dared, praying that the wind wouldn't play any more tricks on him. At last, strong arms reached down to pull him through the hatch into the plane, and he collapsed on the floor, temporarily speechless. The most he could manage was a weak smile of assurance for his uncle.

Russ Steele had aged ten years since Sandy had seen him earlier that afternoon. He put both hands on Sandy's shoulders and squeezed so hard the boy winced. "Thank God you're safe," he said gratefully. "When I read that note—" His voice

choked. "Prince was nagging at me for over an hour before I spotted that paper in his collar. Look, we'll talk about it later. I've got to get those other boys up here."

Within a few minutes, Sandy had recovered sufficiently to crawl over to the hatch and watch Jerry make the precarious ascent. This time the 'copter behaved itself, but Jerry had a great deal of difficulty mastering the Jacob's ladder. Every time he raised a foot and placed it on another rung, foot and ladder would swing out and up and Jerry would find himself hanging parallel to the ground. Russ Steele yelled to him through the loud-speaker.

"Jerry, use your arms! Lift with your arms and push with your feet at the same time. They've got to work together."

"Lucky thing I've been on those ladders before," Sandy observed sympathetically. "Poor Jerry."

But Jerry was eventually pulled aboard without any accident and lay puffing and wheezing on the floorboards like a beached whale.

Quiz had the easiest ascent of all, standing on the bottom rung of the ladder while it was hauled up to the plane.

Then the 'copter's engines roared and it went leaping into the sky like a big grasshopper.

CHAPTER FOURTEEN

The Rains Came

BECAUSE OF THIS LATEST EMERGENCY, Fire Boss Landers had moved his headquarters about two miles down the road to the junction of the two big firebreaks. Over four hundred smoke-eaters were strung out along this line. Twice they had fought the fire on its own terms in the thick forest and had had victory within their grasp—only to see it get away from them. Now, tired and discouraged, they had retreated to strong defensive positions established years before for just such an emergency. They would wait until the fire came to them, hurling itself against the firebreaks as a wild beast throws itself against the bars of its cage. They would watch its struggles become weaker and weaker until, at last, it would burn itself out. But in some vague, intangible way, they felt that the fire had really won the battle. For it would be hundreds of years before man and nature could rebuild what the fire had destroyed.

The remarkable escape of the boys was the only heartening note in camp that second night of the forest fire. Time and time again, they had to repeat the dramatic story for new audiences.

"They ought to strike medals for the lot of you," Paul Landers declared enthusiastically.

"They might just do that," Russ Steele mumbled under his breath, just loud enough for his nephew to hear. As soon as the rescue plane had landed them back at headquarters, Sandy had pulled his uncle aside for a private conversation. Minutes later a carefully worded telegram was on its way to the Pentagon:

FIRE STILL RAGING UNCHECKED HERE AT RED LAKE BUT WE PLUCKED OUR HOT POTATO OUT BEFORE IT WAS TOO BADLY BURNED

"The local telegrapher must be really scratching his head over that one," Russ said with a laugh, as he and the boys sat around in a circle on the ground eating supper.

"What happens now?" Jerry asked.

"The Air Force will fly a top-security demolition team up here pronto. Probably tomorrow morning. The bomb will be dismantled and that will be the end of it. . . . I don't have to tell you boys that the government owes you a debt of enormous gratitude for finding its 'hot potato.' "

Sandy grinned. "We didn't exactly find it. More accurately, we stumbled over it."

"*I* stumbled over it," Quiz corrected, patting his ankle, now tightly strapped with elastic bandage. "But as I pointed out to Sandy and Jerry before, General Steele, we owe our lives to the fact that the bomb fell where it did. If we hadn't had that hole to crawl into, there might have been three well-done potatoes on that hill."

Ranger Dick Fellows approached them with his plate and coffee mug. "Mind if I join you fellows?"

"Sit down," Russ invited him. "How's the fire?"

"Looks as if she'll lay waste the entire area due east and due north of the end of the ridge between the two roads. All we can do now is concentrate on the flanks. If that wind should reverse itself, she might burn clear back to the river before we could stop her."

The boys let out a long groan. "Oh, no!" Sandy said with disbelief. "That couldn't happen!"

"It wouldn't be the first time," Dick said pessimistically. "Fire in Idaho played tag with the fire fighters for three days. Burned off thirty thousand acres before it was controlled by—" In the middle of the sentence, he stopped and cocked his head to one side. "Say, do you hear what I hear?"

Sandy became aware of a loud rustling in the

heavy foliage overhead. "Sounds as if the wind is picking up again."

"Wind nothing!" To the amazement of Russ Steele and the three boys, Dick Fellows unexpectedly threw his mess tin high into the air and let out an ear-splitting Indian yell.

"Holy smokes!" Jerry said, edging back from the ranger. "He's blown his stack."

Sandy heard the deep rumble of thunder, and then he felt the *splat* of a raindrop on the top of his head, followed by another and another. Soon they were falling all around him, making little pockmarks in the dry dust.

"Rain!" Jerry said in an awed voice.

Dick Fellows was nearly hysterical. "Rain!" he repeated. And before Jerry could stop him, he had snatched *his* plate away and tossed it into the air.

"Who's hungry?" Sandy cried gleefully and sent his meat loaf and mashed potatoes soaring. As if at a signal, the other fire fighters who were eating in the grove followed suit.

"I can't tell which it's raining harder," Quiz said, "gravy or water."

Prince and a few other stray dogs who had attached themselves to the camp were having a field day, scampering around gobbling up the discarded food. The road was crowding up fast with men leaping about with their faces turned to the sky.

This was a rain to end all rain. It was almost as if the sky had been filling up during all the weeks of the drought and finally had burst open like a balloon, dumping its whole reservoir onto the parched earth in one big splash.

Sandy saw men dancing together in a knee-deep rivulet running down a culvert at the side of the road. He saw one man scoop up a handful of mud and throw it at another man like a kid with a snowball.

Fire Boss Landers was standing by himself very quietly, his face turned up to the sky, and Sandy had a feeling that tears were running down his cheeks along with the raindrops.

Dick Fellows grabbed Sandy by the arm and pointed to a gigantic cloud almost a mile wide that was rising and spreading across the forest to the west.

"Smoke?" Sandy asked fearfully.

"Steam!" the ranger bawled happily. "What we couldn't do in two days, nature has done in a matter of minutes. The fire's done for."

Sandy saw his uncle walking slowly in the direction of the headquarters tent. "Where are you going?" he called after him.

Russ turned and grinned back at them. "Don't you guys know enough to come in out of the rain?"

CHAPTER FIFTEEN

End of the Trail

SLEEPING IN A PUP TENT was out of the question that night. Ankle-deep mud covered the ground as the rain continued unabated. Russ Steele bunked in with Paul Landers and the boys were invited to use three empty cots in one of the Canadian squad tents. It was pleasant sitting around in a circle on the cots by the dim light of an oil lamp, hearing the drops pelt and drum on the canvas sides of the tent. They shared these quarters with two older men who were veterans of a thousand outdoor adventures, and their stories held the boys spellbound.

But by ten o'clock none of them could keep their eyes open, and they put out the light and rolled up in their blankets. For nine hours, Sandy slept the deep, untroubled sleep of exhaustion until his uncle shook him gently awake the next morning.

"Time to break camp," Russ told him. "The

helicopter pilot is going to give us a free ride back to Red Lake. I don't imagine Quiz will be able to do much walking on that bad leg for a while."

"He's not the only one," Sandy groaned. "I feel about ninety years old. Every muscle in my body aches."

"You'll loosen up once you start moving around."

In the next cot, Jerry pushed himself up drowsily on one elbow. "I'll *never* be the same again."

Russ Steele laughed. 'Hey now, that's no way to talk. You boys have almost three weeks of your vacation to go."

"What!" Jerry squawked. "It feels as though we've been living in the woods all our lives."

"Too much for you, eh?"

"Heck, no!" Jerry said hastily. "I wouldn't have traded a minute of it for anything."

"Even the couple of hours we camped on the hill with that bomb?" Sandy asked slyly.

"Absolutely not," Jerry maintained. "Only if it's all the same to you guys. I'd just as soon spend the next couple of weeks camped smack in the middle of Red Lake aboard that nifty power launch—with plenty of water all around me."

"I'll buy that," Sandy agreed.

Russ Steele nodded. "You can swim, fish and go water skiing. And explore the lake. It's pretty big, you know. Some day, we can cruise down to the lower lake and visit the Indian Reservation."

"Great!" Sandy looked around to make sure that their Canadian tent-mates were not around. "What about the bomb? Are we just going to take off and leave it?"

"Everything's under control," Russ assured him. "A special military detail arrived at dawn to expedite that matter. You'll be relieved to learn that there is no trace of radioactivity in the area whatsoever. Evidently, the casing was not shattered by the impact."

Quiz woke up just in time to hear the last part of the conversation. "That's good. Last night I dreamed that I glowed in the dark like the radium numbers on a watch face. What a nightmare!"

"So what?" Jerry said brightly. "Just think, you could read in the dark by the light of your nose."

Sandy swung his feet around to give Jerry's cot a hard shove. "You didn't think it was so funny yesterday, old buddy."

Russ Steele stood up. "Get a move on, boys. We don't want to miss that plane ride back to the lodge. I'll meet you over at the mess tent."

While they were dressing, Quiz began to speak self-consciously. "You know, I never did get a chance to thank you guys."

Sandy and Jerry exchanged puzzled looks. "Thank us for what?"

"Oh, you know," Quiz said gruffly. "I mean you two wouldn't have been trapped by the fire if you hadn't come back to look for me. Well, you risked

your lives to save me. I don't know quite how to say it, but—"

"Don't say it," Sandy cut in, bending over quickly to tie his shoelace. "Have it engraved on a medal."

"Solid gold," Jerry added. "None of this cheap gold-plated stuff."

"Aw, wait a minute!" Quiz roared. "I'm trying to be serious."

"On second thought," Jerry said, "the town of Valley View might have given us a gold *cup* if we hadn't bothered." He ducked as Quiz heaved a shoe at him.

"Oafs!" Quiz fumed.

Sandy laughed. "Old buddy, you know perfectly well that we couldn't have deserted anybody in a spot like that—not even Pepper March."

"Good old Pepper," Jerry mused. "He sure will feel bad that *you* got off that hill, Sandy. Just imagine, that would have left the quarterback slot on the school team wide open for him this fall."

"Good night!" Sandy sat up straight. "That's right, summer is practically over. In less than three weeks, the new term starts."

Jerry slumped forward sadly on the edge of his cot. "You know what I just did? I just went and ruined the rest of my vacation." He sniffed as the smell of frying bacon drifted into the tent. "But not my appetite. Come on, you guys, let's go to chow."